REPORTER'S RECORD
VOLUME 1 OF 5 VOLUMES

SOAH DOCKET NO. 582-05-1552
TCEQ DOCKET NOS. 1997-1063-UIC and 2004-0746-UIC

APPLICATIONS OF URI, INC. TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY FOR ISSUANCE OF A PRODUCTION AREA AUTHORIZATION FOR PRODUCTION AREA 3 UNDER TCEQ PERMIT UR02827 AND RENEWAL OF TCEQ WASTE DISPOSAL WELL PERMIT NOS. WDW-247 AND WDW-248	)	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

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HEARING ON MERITS
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On the 1st day of August, 2005, the following proceedings came on to be heard in the above-entitled and numbered cause before the Honorable Paul Keeper, Judge presiding, held in Kingsville, Kleberg County, Texas:

Proceedings reported by machine shorthand.

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VOLUME 1

HEARING ON MERITS

August 1, 2005

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(Exhibits retained by counsel)

THE COURT: Good morning, my name is Paul Keeper. I am the administrative law judge for the State Office of Administrative Hearings. Today is Monday, August 1st. The time is approximately 10:20. I am calling the case that has been docketed before the State Office of Administrative Hearings as 582-05-1552.

The case has been styled as Applications of URI, Inc., to the Texas Commission on Environmental Quality for Issuance of a Production Area Authorization for Production Area 3 under TCEQ Permit UR02827 and Renewal of TCEQ Waste Disposal Well Permit Nos. WDW-247 and WDW-248.

At this time I would ask that counsel for the applicant make an appearance followed by the rest of the parties' representatives.

MR. HILL: My name is Jep Hill. I'm here of behalf of the applicant, URI, Inc.

MR. VALDIVIA: My name is Enrique Valdivia. I'm with Texas Rio Grande Legal Aid, and I'm here on behalf of protestant Hermila Garcia.

MS. OBERLIN: My name is Melanie Oberlin, and I'm here on behalf of protestant South Texas Opposes Pollution shortened to the acronym STOP, S-T-O-P.

MR. REDMOND: My name is Don Redmond. I'm an attorney representing the Executive Director of the Texas Commission on Environmental Quality. And with me is Dawn Burton, also an attorney representing the executive director.

MS. MANN: And I'm Christina Mann. I'm the attorney representing the Office of Public Interest Counsel of the Texas Commission on Environmental Quality.

THE COURT: Thank you very much. Okay. At this time I would ask if counsel for the applicant has an opening statement.

MR. HILL: I do, your Honor. Before I reach that, I'd like to raise -- I'd like to raise again the objections that URI has raised in its briefings to date as to the scope of the issues in the case, as to the -- and as to the standing of the participants and ask that that be -- that those objections be carried along as live so that they don't have to be raised again and again.

THE COURT: Any objections to that request?

MR. VALDIVIA: Not from me, your Honor.

MS. OBERLIN: No.

THE COURT: All right. Your request is

granted.

MR. HILL: Second, I'd like to request that the testimony that -- and exhibits that are offered by URI in this proceeding be offered subject to those objections and that that -- that that subordination be recognized if that's acceptable.

THE COURT: Any objections to that request?

MR. VALDIVIA: I'm not sure I understand if he means to say he doesn't intend the exhibits and so forth to waive any aspect of the objections. Then, I'm fine with that.

THE COURT: Okay.

MR. HILL: That's exactly the purpose.

THE COURT: Okay. Hearing no objections to your request, your request is granted.

MR. HILL: If I may stand as I make a presentation. URI is here today in -- to present two applications for renewal of injection well permits WDW-247 and 248. First of all, those two wells were permitted to serve as part of the process to be used at the Kingsville Dome Mine.

One of the wells, 248, has been drilled and installed and operating for over 17 years with annual reports of its operations filed with the

agency. 247 was permitted as a backup to the first well to be available in the event that subsurface conditions -- well performance or conditions should in any wise make it desirable to complete that well.

And the permits for the wells were issued such that the sum of the injection rates of the two wells is limited to a hundred gallons per minute so the additional well doesn't compete, if you will, with the existing well.

The permit hearings on the renewal of those permits will raise the usual chapter, Texas Water Code 27.051 issues. And those will principally be addressed by direct testimony witnesses, Demuth and Grant. However, Mr. Pelizza has signed the applications for those.

There was an issue raised in the prior briefings and filings of testimony that the -- the applications for 247 and 248, although sealed on individual pages by a Texas professional engineer, was not sealed in whole by either an engineer or a registered geoscientist, that -- that requirement not having come into force until after these applications were filed.

Nevertheless, you will hear in testimony that Mark Pelizza, the company vice president who

testifies that he has examined the work, that he supervised the preparation of the applications and so forth, was then, as he is now, fully qualified and has -- and as soon as the registration provisions for professional geoscientist were established by the State of Texas, he qualified and holds a registration and has a stamp.

And unless there's objection by the parties, Mr. Pelizza will offer his stamped pages for those applications in response to an expression of some interest on that subject later. That was done later in the process.

Essentially to qualify a deep injection well, you file -- you have to file an application that demonstrates that the zone into which you propose to inject will contain the material vertically -- against vertical or migration, up or down.

That is to say, the overlying formation has to be a sufficient block to flow, and the underlying formation has to be a sufficient block to flow so that the material will not escape. And, number two, you have to demonstrate that the lateral propagation of the pressure front created by the injection will not impair, fracture the formation or impair other rights.

And the applications get into that in some detail, but the -- the nut of the matter is to qualify the injection zone as a containment and then to qualify the well as a sufficient -- an avenue that will contain the fluids as they are being injected and will be adequately sealed so that it doesn't breach containment and then that the materials of construction -- the materials to be injected and the materials of construction of the well and the connate fluids of the injection formation -- all this injection is in the formations that are saturated.

And the rock matrix of the formation will not react with the injected material such as to compromise the integrity of the containment vessel, either by pressure buildups or by destruction of the -- of the walls or the containment, and that the material of injection will not auto react by virtue of the increase in pressure and temperature as it is injected as naturally happens with injection to depth. All of that's been done.

And what you will hear by way of testimony will also be -- all that has been done. And the annual monitoring of the performance of the deep well that has been installed has demonstrated repeatedly that it is performing exactly as expected

and exactly within the parameters authorized by the commission. Anyway, that's the nut of the testimony on the deep wells. We can get into peripheral issues.

The third item is the application of URI, Inc., for issuance of production authorization No. 3. I should say reissuance because production authorization No. 3 was initially issued in 1998, and mining began and was conducted under it, and then there was a court order.

The agency -- the -- correction. The applicant ceased to mine when the market price of uranium didn't justify further mining activity. Then there were further proceedings. The agency's order was remanded to the agency. The agency then said, well, ask the applicant to update the application.

And so we -- we will see in the course of this hearing an original application, a layer of later materials added on, and the agency dealing with the fact that ordinarily, one, a PAA doesn't involve multiple applications staged over seven years.

And, number two, reflecting the fact that in the course of recorded history, there's never been an -- there's never been an adjudication of a production area authorization application for a new production area.

And so we are in some sense walking on new ground, ground which URI has argued already -- is -- is really not supposed to be the subject of public hearings, but on we go. In the hearing process -- because there is no statutory basis for the production area authorization, we do not have statutory issues such as are found in Chapter 27 of the Water Code for underground injection permits.

We have instead only some regulatory indications of some items that are to be provided in an application and mentioned in the Permit UR02827, which is the area permit for the mine. You will hear in this proceeding some reference to base permit. That is nomenclature which -- it has no basis in law or regulation. It is a -- it's just a misstatement. This is correctly called an area permit.

You will find that the items that are submitted in the application are dictated by the items listed in the provisions of the area permit which call upon URI to submit these details, these pieces. And so we will have an application for you that is really different from an application for an injection well permit.

And we will be arguing about issues that will not result in the making of statutory findings.

And so we don't find the -- the result of the hearing process will not be findings as to the public interest or whether groundwater will be protected or whether correlative rights or rights -- mineral rights will be protected.

Those issues have already been adjudicated, and -- and all parties -- the whole world is bound by the commission's order of December 20, 1989, which determines these matters absolutely. That order cannot be attacked except in a proceeding competent to amend that order, and this is not a permit amendment proceeding in regard to UR02827.

This is a novelty which has no footing in the statute, but on we go with the documentation. As a result, the documentation you will see for PAA3 is presented in the nature of an application. And these are documents which are part of the working documents and the business records of the company as they have prepared to enter mining.

The documents are, first of all, a mine plan. You may hear some mention -- repeated mention of the mine plan. It's important always to refer back to the -- definition of mine plan is the miner's own estimate -- not a commitment, an estimate -- of the pace and sequence of mine development, including

restoration.

It is an estimate because in the mining business, a miner always -- must always keep track of at least two things. One is, what is the market if there is any? And, second, how is the mine responding to the process of in situ leach mining, and what are my costs of production? So a miner gives an estimate which is updated from time to time based upon his -- his continuing reassessments of these items.

Second, in addition to a mine plan, it contains a restoration table. A restoration table is a table of values which will -- which it is anticipated will be used to determine or will be the target values for the reclamation of the groundwater or restoration of the groundwater in the mine zone after mining has occurred within a production area.

The restoration table in this case stands alongside another item which is, to my understanding, unique. It may be -- it may be only unusual, but I believe it to be unique. And that is, UR02827 contains, I believe, a Table 2 which provides a restoration range table.

It anticipates that there will be variation and restoration tables across the 2,000-plus acres of the permitted area of the mine of which PAA3

is less than 200, I believe, but it's a minor fraction. It is a range of restoration values which are anticipated by the commission.

Obviously, there's possibility for conflict between these, and that conflict has been resolved heretofore in regard to PAA3 by URI committing to the commission that it did not seek any restoration value which would be more relaxed than contemplated or anticipated by the restoration range table. That commitment remains.

There can be no conflict because URI asks no relief from the restoration range table of the application. Obviously, the restoration table, there will be some -- may be some discussion of this. I don't know. Restoration table can be amended, that no such amendment is contemplated or on the table in this proceeding.

And there are reasons why they can be amended, one of them being in times of great drought as was experienced in South Texas in the early '80s. There is a distinct preference for not wasting water and restoration which is deemed to be more wasteful of water than the state is willing to be -- at the time may be curtailed in the interest of the state in preserving water, even water of dubious quality

because perhaps it can be diluted at least for use of stock watering water.

The restoration table is produced from other documentation which is provided with the PAA. Let me move on with that. The baseline water quality has to be sampled. It is sampled from the -- it is -- it is determined from samples taken from both monitor wells and from other baseline wells in the area.

Some people don't realize, but you cannot make or file a production area authorization application without having first drilled and completed a monitor well ring to surround the production area. And, indeed, a miner -- a rational miner wouldn't designate a production area finally for production and for the drilling of monitor wells unless he had mapped the ore fronts, the locations, if you will, of the subsurface where the ore is thought to occur.

Miners who are good at this stay in the business. Miners who are bad at this drift out of the business, become owned by their bankers. So there's a premium on knowing where the ore is. Knowing where the ore is determines where the production areas are. It also determines the intended sequence and the pace of development. And it determines where the monitor wells must be, or within a range it determines them.

This is an important point because the commission in entering its order December 20th, 1989, made a full page of findings relevant to the adequacy of the monitor well program that is authorized by that permit and determined -- determined to be sufficient for the entire 2,100 and something acres of the Kingsville dome area mine.

Now, applying the commission's regime for determining where monitor wells must be situated both in the horizontal plane and where they must be completed, either over, within, or beneath the mine zone, is important because the -- the applicant in filing a production area authorization application must place monitor wells -- must have placed them and completed them and, indeed, must have pump tested them as we will later see.

So monitor wells are already there. The location is determined by the company or, as in the case here, by the company in consultation with the agency prior to the drilling of the wells. The monitor wells for PAA3 were determined in accordance with the agency's rules in the manner approved by the permit, the area permit, and exercising the discretion left to the applicant in a manner that was -- that resulted from consultations with the agency to be sure

of its satisfaction that was in the range of the discretion exercised by URI. The agency was comfortable with the choices.

Control of parameter upper limits. This really does sound complicated. Basically what this is all about is, the monitor wells are there to monitor what's going on in the aquifer. I should perhaps divert a minute and speak of how the -- what the monitor wells do.

For the purposes of in situ leach mining, the company must drill a number of wells near a uranium formation. And it must monitor that formation to ascertain, first of all, as in the case of deep wells, the mine fluids that are set into circulation.

The events that are set into motion by the mining process do not rise above a certain identified containment level and do not fall below a containment level and within the containment level do not spread laterally outside of the intended mine area.

To do that there are monitor wells completed into the first overlying sand; that is to say, the first sand above the mine zone which is suitable for monitoring. That will be an issue later

on as you will hear in the evidence.

And must complete monitor wells beneath the intended mine zone and in the pump testing process must pump those wells to ascertain that the wells ringing the outside of the mine area are in communication with the pumping and that the wells which are completed above and below the mine zone are not in communication with the pumping process.

This is the critical test. And in this case you will hear that the monitor well ring passed that test with flying colors. It is very clear from the evidence. You will hear from the experts that the monitor wells prove the success of the containment required.

There's one other element to containment, however, and that is whether the wells themselves create channels for loss of containment. But the pump testing process confirms that, so -- the wells have been tested. The wells have been installed properly and completed.

So we have proof of containment and the security, if you will, of the vessel both as to the formation as -- as to the wells themselves. There are two issues to distinguish in the monitoring process which are important to understanding what we will do.

One of those issues is the passage of the pressure front or -- pardon me -- the -- the fluid front. And the point we wish to make here is, the monitoring process will confirm that the -- first of all, it will confirm by monitoring pressure that we don't have a disturbance as far away from the mine area as the monitor wells and, hence, we certainly won't have any beyond that.

And, second, that we -- even if -- even if there were a disturbance in the pressure -- for example, water begins to flow toward the monitor well instead of -- as it does during the mining process. You will see a pressure change, monitor well.

And presumably if there were fluids escaping that contained materials from the mine zone, you would also see a change in the physical constituents or the physical characteristics and the constituents of the water. We'll get into that in greater detail later on.

But it's important to understand that the permitting process is already established, that the proposed technique for managing the containment of the water is adequate. That is to say, it can be adequately executed and has been, as we will see in this case, for years.

During the course of mining, the way the material is kept in the mine zone is by what it can call hydrodynamic control. That is to say, the company is always withdrawing more fluid from inside the mine area, net overproduction of fluid, so that the net flow of fluid around the mining area is into the mine wells -- the monitor wells -- excuse me -- from outside.

That is what maintains the isolation of the process. After the mining is completed, there -- there starts a restoration process which also controls the fluid and then assures fluids are neutralized and returned to conditions suitable -- comparable to premining suitability.

There will be some discussion about the details perhaps of what the mining process results in. Fortunately for the mining process, unfortunately for the media, there's nothing really all that dramatic to it. The fluids are controlled. The materials are controlled.

Radiation, which naturally is associated with uranium, remains where it's supposed to remain. And the -- the groundwater in the mine zone, as you will hear later on, is radioactive today. It was radioactive when Columbus landed.

And the presence of URI is a result of -- of the fact that the material is there, uranium, and other materials are there. And URI did not put them there. URI is doing its best to remove those materials.

And so moving back to the application process, we will -- we will cover in some detail, most likely, the -- the mining process. And Mr. Pelizza's testimony has outlined the ISL mining process in the anticipation that ISL mining, although widely practiced, is not widely understood apart from the community of people who are involved in it or regulators.

In addition, the company must have provided -- based on its estimate of the number -- the maximum number of wells that would be open at any given time, must have posted a financial assurance adequate to ensure the plugging and abandonment of those wells.

Now, that abandonment may sound evil to those unfamiliar with the process, but the abandonment of a well is merely the wrapping up of your activities with it and the preparation of the well to be left alone so that it no longer serves as a well but remains as a plug -- remains plugged and, therefore,

has no further life and use of the well.

The bond must pay for someone else to -- for a third party to do that. There has -- the bonds are calculated in a routine way based on the price of how much cement it will take to fill the well based on the price of consultants and trucks and people to go out and do it.

These prices are followed regularly, as I understand it, by the regulators. They're certainly followed by the companies. And there has never been an issue as to the quantum of dollars or the form in which these assets are provided; namely, in this -- in these present days, it will be a letter of credit that this is sufficient to pay for plugging and abandonment.

I suppose there is an issue. The issue is, it's always several times what it would really cost. And -- and yet people talk as though it -- there may be some question as needing to be more -- the fact that probably -- seldom -- seldom does the plugging process or abandonment process require more than a fraction of what's provided.

The -- aside from the financial assurance, there will be discussion of the performance, if you will, of URI in restoration of

groundwater in prior production areas. URI has produced ore from production area No. 1 and produced ore from production area No. 2 and commenced restoration of these.

URI has continued with those in restoration. The -- when these permit -- these production areas were authorized, the funds that were thought to be required to restore groundwater -- which is an issue for the Texas Department of Health or the Department of State -- State Health Services, but the restoration of which is an issue for the commission.

The restoration dollars required were based on the assumption that there would be pore -- pore volumes, p-o-r-e volumes, of water required to be circulated to achieve restoration. By the time the process was well under way, it was evident that the number of pore volumes that would be required would be around six.

Nevertheless, restoration proceeds. It is on schedule. There is a -- there are a lot of stories circulated to the effect that there was an obligation to finish restoration in one place before starting in another. And there is no basis except newspaper accounts for such stories. It's just simply not true.

Nevertheless, restoration may be an issue. URI has restored on schedule. URI has not failed to restore. URI has taken drastic measures to ensure the continuity and success of restoration. And since the application was filed, URI continues to restore groundwater in production areas 1 and 2 at a rate of about 20 million gallons per month.

URI in the outset of -- just before the outset of this hearing, URI engaged in discussions with parties to settle this and entered into an agreement with Kleberg County which satisfied the county's concerns and which contains a number of novel and, I think, very forward-looking provisions to the benefit of Kleberg County.

It provides for restoration to ensure continued restoration in 1 and 2 -- areas 1 and 2. It also provides, for -- for example, additional monitor wells to be maintained at URI's expense and for restoration of wells in areas where water was of drinking water quality prior to mining. URI has agreed to restore to drinking water quality after mining.

That is not required by the rules because restoration is based on general area wide averages. URI has undertaken the additional burden of

meeting higher standards to the satisfaction at the instance of the commissioners' court.

And URI has also agreed to -- to participate in and to fund the creation of a citizens review board to monitor in -- at such level as they wish the activities at URI's Kingsville Dome Mine. And that citizens review board has already begun to function. And as I understand it, the intervenors here have at least one position on that board already.

Nevertheless, the -- the settlement agreement with Kleberg County charged some new ground in terms of marking an even higher standard, which URI will be meeting even though that standard is not required or was not required by the law and regulations.

There will be some discussion in this proceeding of URI's compliance history. URI's compliance history, as you will hear, is certainly within the zone of what the commission calls average. And URI is continually subject to monitoring and supervision by not only state and federal agencies but also by now the citizens review board as well.

Without anticipating the line the proof will take in that direction any further, I'd like to conclude by saying the application as filed was deemed

complete by the agency, sufficient. It was deemed administratively complete. Were it not, there would have been no notice of this hearing.

It was deemed -- the application for renewal, WDW-247 and 248, were deemed sufficient and administratively complete. However, in the case of the PAA, that's critical, because the application that is required by the permit, the area permit 2827, the application for PAA3, the content of that application is dictated by the permit and is dictated by the rules.

There is no mention in the rules, the law, or anything else as to what conclusion is to be drawn from that application. But the application was filed and was deemed complete, sufficient for the agency to complete its analysis of draft and proposed draft PAA.

You may in this -- in the process of this hearing find that the draft proposed PAA has changed somewhat. I've been to a number of commission hearings. I've never seen one yet for the permit that walked into the hearing is the one that walked out, and presumably that's supposed to be good.

I -- I think that you will find that the resulting proposed permit is not materially different

from or probably better than the one which we had on the table walking -- walking into the hearing.

The -- there will be some discussion of corrections to the application which will be -- those corrections, A, were not necessary. B, you will hear the testimony -- materially change anything. There are cleanups and corrections to paperwork which did not adequately reflect the underlying facts and the underlying analysis of geology, hydrology and so forth.

But the -- the -- if you will, the illustrations didn't match the underlying text, and they have been corrected and updated to produce a clearer record. And the purpose of that clearer record is to be -- is really served later on when the agency should refer back, if it should -- if it should, to understand exactly what was put on the table in this proceeding.

So with that interest in mind, URI has tendered with its prefiled rebuttal testimony some replacement pages which will be explained more fully or explained in the -- in the prefiled rebuttal and probably will be covered in cross-examination.

These matters on the table, it is unfortunate but true that most of the public comment

and certainly the press coverage this matter has drawn is -- doesn't really recognize or deal with the -- either the underlying issues or the underlying facts. And that's just an unfortunate -- that's an unfortunate fact.

However, the issuance of the PAA is precisely within -- precisely the thing contemplated when the permit was issued, 2827, in 1989. The geology is the same. The process is the same. The wells are the same.

And there is no question that the process of mining can continue securely, that there is no threat to the environment or the groundwater or to mineral production or anything else posed by any of these applications. And that will be amply proved both by the testimony of experts and by abundant documentary exhibits.

THE COURT: Thank you very much. As I recall, the agreement in the prehearing conference was that Ms. Garcia and STOP would have the right to independently put on their introductory remarks, although they would be aligned as parties otherwise. So at this point I'm not sure which of the two of you would prefer to go first.

MR. VALDIVIA: I think -- I expect my

comments to be short, and so I prefer to go last.

THE COURT: Okay. Very fine.

Ms. Oberlin.

MS. OBERLIN: I'm going to stand at the podium so folks in the audience can hear.

THE COURT: Feel free.

MS. OBERLIN: And, your Honor, I was wondering if it might be appropriate to take appearances for the record of people that have been designated as parties but are not represented by their own counsel and who will appear -- or be aligned with the interest of Ms. Garcia and STOP.

THE COURT: That's certainly fine. Would you like to introduce them, or would you like me to --

MS. OBERLIN: Well, I think we know -- the couple that I know. And then if there are others that I don't recognize by their face, maybe they can stand up. I notice that Mr. and Mrs. Eleuterio -- and Enedelia Saenz -- Mr. Saenz, can you spell you and your wife's names for the court reporter, please.

MR. SAENZ: Eleuterio is E-l-e-u-t-e-r-i-o. Last name Saenz, S-a-e-n-z. And Enedelia, E-n-e-d-e-l-i-a.

MS. OBERLIN: And I believe that

Mr. De la Paz is here.

MR. DE LA PAZ: Adrian De la Paz.

MS. OBERLIN: Adrian De la Paz.

MR. DE LA PAZ: And my wife, Sonya.

MS. OBERLIN: Sonya. And how does Sonya spell her name?

MRS. DE LA PAZ: S-o-n-y-a.

MS. OBERLIN: And those are the only parties -- Mr. Byron Cumberland, B-y-r-o-n, Cumberland, C-u-m-b-e-r-l-a-n-d.

MR. SAENZ: Humberto Garcia.

MS. OBERLIN: Okay.

MR. SAENZ: Humberto Garcia.

MS. OBERLIN: Humberto Garcia?

MR. SAENZ: Humberto Garcia.

MS. OBERLIN: Humberto, H --

MR. SAENZ: H-u-m-b-e-r-t-o.

MS. OBERLIN: Garcia, G-a-r-c-i-a. Okay. With that, my name is Melanie Oberlin on behalf of protestant STOP, South Texas Opposes Pollution. STOP is a citizens group made up of residents of Kleberg County, many of whom live very near, adjacent, or within URI's Kingsville dome mining operation area site.

STOP's mission is to protect and

preserve the natural resources in and around Kleberg County in the South Texas region through educational efforts, information collection activities, and active participation in meetings, hearings, and other governmental processes at the local, regional, state, and federal levels of government.

These activities include opposing any activity that would contaminate the Goliad aquifer in Kleberg County and opposing any other activity which may have a detrimental impact on human health, safety, and qualities of life or the environment in this area.

Residents and STOP members have participated for more than 20 years in regard to URI's Kingsville dome operations to ensure adequate protection for the drinking water in this area from threats of contamination by URI's mining activities.

Here at Kingsville dome, URI produces uranium from the Goliad aquifer. For the record, that's G-o-l-i-a-d. The Goliad is the same aquifer from where local residents draw their drinking water and the water that they use for their yards, households, and livestock.

During the uranium-mining process, URI injects solvents into the groundwater that cause minerals such as uranium to move from solid form where

it exists as rock into liquid solution which mixes with the groundwater.

URI then pumps this mixture to the surface and extracts the uranium. This process leaves many waste products that URI then disposes of in its deep injection well, which is the injection well that is also slated for renewal in this process, waste injection well WDW-248.

During the mining process, toxic heavy metals other than uranium are also produced. These toxic metals include arsenic, selenium, and molybdenum and also radium 226. These metals are toxic to people and environment.

Uranium causes damage to internal organs, especially the kidneys. Its radioactivity poses increased risk of cancer, especially lung and bone cancer. The only protection that the people in the area have from contamination by URI's mining activity is in the monitor well ring that URI puts around the mining area.

Thus the people here rely on URI to adequately monitor and report those monitoring data to the agencies and to clean up excursions if any should occur; that is, that fluids escape the mining area ring and the mining area.

The people also rely on URI to create what Mr. Hill referred to as the hydraulic control that keeps the groundwater from following its natural flow path to the northwest and out of the mining area.

More than 45 families in this area live around the perimeter of production area 3. They have wells and farms just outside the mining area. As I mentioned, water in this area, groundwater from the Goliad moves to the northwest.

Production area 3 is closer to the City of Kingsville, the naval air station, and many of those 45 families than their earlier production areas, production area 1 and production area 2. URI has mined production areas 1 and 2 and parts of production area 3, and still groundwater in those areas is not restored.

URI promised this community that it would complete restoration two years after completing mining. For production area 1, that meant that complete restoration would have occurred by 1991 and in production area 2 by 1992. Yet today in 2005, URI still has not restored those areas at the Kingsville dome mining site.

In the year 2000 URI told TNRCC, the predecessor agency of TCEQ, that because of financial

insolvency, it could not restore areas in PAA1, PAA2, or at its Rosita mine site in nearby Duval County.

Despite the objections, many of the residents here, STOP, and the county, TNRCC and Texas Department of Health entered into an agreement with URI which allowed it to use the collateral for $1.7 million in performance bonds held by state agencies for restoration costs to use to begin the cleanup in PAA1 and PAA2.

Its restoration of PAA1 and P -- began, finally, in the year 2000. Citizens here are concerned about water quality contamination. Data from the Garcia Hills well, which is located just northwest of the mining area, shows that in 1988 their water quality met all of EPA's drinking water standards.

But in October of 2004, the folks living at Garcia Hills received letters from the Environmental Protection Agency warning them that since 1996 their groundwater had been contaminated with uranium and radium, alpha radiation at levels five to eight times higher than EP -- EPA's maximum groundwater quality levels.

STOP and this community have worked for seven years to have this particular hearing which they

believe is necessary to allow them to review and know the information contained in URI's applications for PAA3 and renewal of the injection wells.

URI must prove that it can protect the groundwater from pollution in order that PAA3 application authorization and the injection well renewals can be recommended for approval by the commission, Texas Commission on Environmental Quality.

No expanded mining can occur in the KVD mine site until URI proves that the application for a production area authorization and the waste injection wells meet all the laws of this state and is safe for the people and environment here in Kleberg County.

Restoration of the previously mined areas should be completed before production begins in production area 3. If the judge decides to recommend to the commission that the authorization for PAA3 should go forward, then STOP has nine things that it would like added as special provisions to the production area authorization.

And those things are that the -- that changes be made to the current restoration range table that ensure that all restoration values fall within the range that's set up in the area permit or better to protect water quality.

Two, that an updated mine plan be included that has dates that must be followed and are enforceable for restoration and mining so if URI takes longer than what's in the mine plan, the community has a right to complain and can get enforcement action.

Third, that an additional monitor well be placed closer to the production area; that is, the area where injection and recovery of uranium is slated to occur in production area 3.

Four, that the people receive assurance that the size of production area 3 can never increase.

Five, that the people can be assured they will receive notice if URI ever goes back to the agency and asks for amendments to its restoration table included in the area authorization.

Six, that when URI finally gets to a point of restoring production area 3, it demonstrates for one year, rather than the regulatory minimum of six months, that groundwater quality is stable and restoration can be approved.

Seven, that the De la Pazes and the Benaventes, who live very near to the production area in production area 3, get some protection from surface flows contaminating their households.

Eight, that completion of the section -- second injection well, which is up for renewal, that is, WDW-248, be completed before production in production area 3 commences so that all wastes and restoration volumes can be accommodated by the two wells rather than relying on the current well, WDW-248.

Nine, that URI be required to post full financial assurance, not just for plugging and abandonment on the wells but also for groundwater restoration. And this form of financial assurance should be in something recognizable, like a letter of credit or a bond, and not in some type of agreement from the state that allows URI to draw off moneys that have already been put in escrow for restoration.

Basically the community is here to make sure that it will remain safe and can live free of fears of contamination by URI. And URI will have to prevent in this hearing in order to succeed in its application for production area 3 and renewal of the waste injection wells. Thank you.

THE COURT: Thank you. Mr. Valdivia.

MR. VALDIVIA: Thank you, your Honor. Basically I want to start out and reiterate Mr. Bob Kier's opinion in this case. That's really at the

heart of our position. Mr. Kier opined that URI's application for PAA3 does not meet the applicable regulatory requirements and is inadequate to ensure protection of human health and the environment.

And similarly, he -- he opined that the renewal of WDW-247 and 248 also do not meet the regulatory requirements for those permits. That is what we intend to present to you -- to you and to the commission, that the insufficiency of the application of PAA3 in particular does not match up with the regulatory requirements that Mr. Hill referred to in his opening statement.

And, in fact, he has minimized the corrections he proposes to make, but, in fact, those are evidence that there is a problem -- has been a problem with the application. And there are problems that go directly to the heart of the very things that Mr. Hill claims have been proved, that containment is adequate, that the wells have been constructed according to regulation and placed where they should be.

With regard to the -- to the wells, keep in mind there will be evidence that'll show that their useful life was five years and that these wells have been in the ground for eight or more years. Also,

keep in mind that, as Mr. Hill said, this permit -- these applications were -- were -- the parameters of placement of the wells, for example, were done in consultation with the agency.

Well, the original agency was the Texas Water Commission. The subsequent agency was the TNRCC. And now we are here before the Texas Commission on Environmental Quality, the third agency to review this activity.

We submit that that in itself has created problems of oversight which you should consider when you consider the inadequacies of this application. We believe that they're egregious. We believe that there is no certainty that if -- if PAA3 activity proceeds that human health will be protected, that, in fact, the record shows that it will not be. Thank you.

THE COURT: Thank you very much.

MR. REDMOND: Again, my name is Don Redmond, and I represent the Executive Director of the Texas Commission on Environmental Quality. The executive director's role in a contested case hearing is very limited. It's to provide information to the judge and the commissioners to complete the administrative record.

The executive director is responsible for processing and reviewing the permit production area authorization applications and making recommendations on those applications to the commission. The executive director's direct case in this proceeding will thus focus on the processing and -- and review of those applications. Thank you.

THE COURT: Please.

MS. MANN: Hi, I'm Christina Mann, and I represent the Office of Public Interest Counsel at TCEQ, and we often refer to that as OPIC. OPIC is a part of TCEQ but is not affiliated with the executive director but has an independent mission. And here it's to represent what we consider the public interest and proceedings before the Texas Commission on Environmental Quality and related hearings such as today's proceedings.

OPIC attempts to ensure that the record reflects information that OPIC believes is required for the decision-makers to -- to have so that they can make a decision which adequately considers the public interest.

As a result, OPIC does not file a direct case but participates in cross-examination and -- and through that process helps to complete the record so

that we have what we consider the information that we need to help those make a decision in the public interest. Thank you.

THE COURT: Thank you very much. All right. Mr. Hill, are you ready to proceed with your case in chief?

MR. HILL: Yes, your Honor. Perhaps we should take a moment and begin marking some exhibits, because we're going to -- we're going to use the applications which were filed and -- can we go off the record while we --

THE COURT: Certainly. Let's go off the record.

(Recess from 11:13 a.m. to 11:46 a.m.)

MR. HILL: Applicant calls Mark S. Pelizza.

(The witness was sworn)

MARK S. PELIZZA, P.G.,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. HILL:

Q. Would you state your name, please.

A. My name is Mark S. Pelizza.

Q. I hand you now a document that has been identified as URI Exhibit No. 41, which I will

represent to counsel here is prefiled Exhibit -- prefiled testimony of Mark S. Pelizza. Ask you to leaf through it to ascertain whether it is what it appears to be.

A. I leafed through this briefly before we went on the record, and I've looked through the tabs. And in general I -- I see this is my prefiled testimony to this case along with the attachments.

Q. Were there any items in it that you thought had been miscopied or miscollated?

A. There was one.

Q. Okay. Would you characterize what that is?

A. Yes.

Q. First of all, where is it in the book?

A. I noted in Attachment D, which was entitled Updated Mine Plan, that the print shop that did this work printed the document in portrait orientation. And it's a long document, and it should be in landscape orientation. I had a copy of the landscaped dump mine plan in my records, and I have initialed it today.

Q. Okay. There was -- let's see. Let me ask you -- because of some other matters I have heard of, would you identify what the attachments are. Just go through them, if you will, what -- what the

attachments are to your prefiled -- A, B, C, D, E, F, G, so we can be sure we're working off the same text.

A. Again, the -- the document starts with my prefiled testimony. Attachment A is my statement of qualifications. It's essentially a --

Q. There's no need to characterize. Just -- we need to just identify it.

A. Attachment B -- or Attachment B-1 is a brief overview of in situ uranium mine. This is a technical write-up for --

Q. Just --

A. Attachment 1 is the act for exemption approval. B-1 is the act for exemption approval for the Kingsville Dome site. B-2 is an exhibit showing groundwater quality at other in situ leach sites across the United States. B --

Q. Does it contain colored --

A. B --

Q. -- color highlighted text?

THE COURT: Yeah.

A. B-1 does contain color highlighted text. Attachment B-3 is a general discussion of in situ leach technology with color photographs.

Q. (By Mr. Hill) Okay. If you would, just read the title and confirm what's behind the title is what

the title is about.

A. Attachment D is entitled Adjacent Water Well Monitoring and Results.

Q. Does it contain color highlighted text?

A. It does. It -- it includes graphics that are in color. Attachment C is entitled Restoration Progress Report. Attachment D is entitled Updated Mine Plan. We just addressed that. Attachment E is entitled World Uranium Supply and Demand. It has an insert that is in color.

Attachment F is entitled Financial Security Instruments. I notice some subtabs. Subtab 1 is the surety bond 011. Attachment 2 is 021. Attachment 3 is 031. Attachment 4 is WDW-248. Attachment G is entitled Waste Analysis Plan.

Attachment H is entitled Groundwater Restoration Performance Agreement. It has two tabs. H-1 is Attachment A of that agreement. H-2 is Attachment B of that agreement. Attachment I is entitled Settlement Agreement with Kleberg County. I note --

Q. What -- let me ask you: Is that identical to the exhibit -- URI Exhibit 1 in this proceeding, already what -- copy of which I hand to you?

A. It is.

Q. So --
A. And --
Q. Can we refer, for the purpose of that exhibit, to URI Exhibit 1 to see the settlement agreement with Kleberg County?
A. Yes. Attachment J is called Background Undermines Agreements. And -- and as it turns out, that is where I'm seeing the copy of the Kleberg County settlement agreement now under J. And I believe that that's just a collation issue.
And J-1 is Attachment 1 of the Kleberg agreement. J-2 is Attachment 2 -- or Exhibit 2. J-3 is Exhibit 3. J-4 is Exhibit 4. J-5 is Exhibit 5, and J-6 is Exhibit 6.
Q. To the mines -- Kleberg --
A. Mines -- mines and settlement agreement.
Q. Okay. I refer you now to the first page following 28 of 28 of your prefiled testimony and to line 40 where there's a reference to an Attachment K, which you have not mentioned. Is there an Attachment K?
A. No, there is not.
Q. All right.
THE COURT: I'm sorry. On what page is that?

MR. HILL: It's the first -- it's an unnumbered page, the first unnumbered page following page 28 of 28 of Mr. Pelizza's prefile.

THE COURT: Okay.

MR. HILL: There is -- well, I'll let --

THE WITNESS: There is no Attachment K.

MR. HILL: I would --

THE COURT: Please proceed.

MR. HILL: I would ask the witness to draw a line through that and write his initials and the date by that line to indicate that the K is not attached.

A. I am putting my initials and August 1, 2005. I think it would be appropriate also to do the same where it's listed on the last page of my testimony.

Q. (By Mr. Hill) Page 28?

A. Page 28.

Q. That would be line what?

A. 26.

Q. All right. Let me refer you now to the whole of Exhibit 41 but with particular reference to the first 29 pages of it and ask you, is that your prefiled testimony as filed in this proceeding?

A. It is.

Q. Second, aside from spelling corrections and

so forth which may -- may be made or may -- may need to be made, do you wish to adopt this prefiled testimony and the referenced items as a portion of your testimony in this proceeding?

A. Yes, I do.

Q. There are referenced in this exhibit -- or there are in this exhibit references to two documents or a number of the documents. I'll go first to the item which I have identified as URI Exhibit No. 22, which is the application for PAA3.

THE COURT: Are there any objections?

MS. OBERLIN: Not at this time.

THE COURT: All right.

(Off the record)

Q. (By Mr. Hill) The one I just gave you, from my recollection, didn't have the additional information that was in the copy filed with the administrative law judge. So what I'm going to ask you to do is to identify that -- that one, and if it is the application for PAA3, go ahead and -- which I -- and then we'll go ahead and make it No. 22 instead of this one that I had in my file.

A. So you want me to do the same drill that I --

Q. Well --

A. -- did with this right now?

Q. -- I want you to leaf through the item which -- first of all, I want to show you the item that was previously identified as 22. And I want you to see what that is and then ask you if the -- if the copy given to the judge isn't the one that --

A. Which one was given to the judge?

Q. This one that's marked with his name.

A. Okay.

Q. And I think you'll see the difference. And if so, the copy which was provided to the judge should be the 22.

A. Okay.

Q. Okay. Now, first of all, as to the item identified as Exhibit 22, it was called to my attention that it did not match the one provided to the administrative law judge. So let me ask you, if you will, to look at the one provided to the administrative law judge and ask you if it contains the complete application provided for PAA No. 3.

A. What I see here is the application. The application starts after some supplementary materials that were used to update the application. The applications -- begins just ahead of page 1, tab 1, and it runs through tab, it appears, 11.

Q. Okay. Then, is that the exhibit that should

be identified as URI 22, which was the name -- the number earlier given to PAA3 application?

A. This is the PAA application.

Q. Okay. And now it's identified as 22; is that correct?

A. Yes.

Q. Let me show you now items marked -- now, let me show you the items identified as URI Exhibit 23. And since there are going to be two volumes, I'll refer to it as -- this as 23-A and ask you to identify that volume.

A. This is the application that was filed for the renewal of waste disposal 247 and 248.

Q. Is that the entirety of the application?

A. I believe there was also a attachment.

Q. Let me ask you if you recognize the volume I'm handing you now identified as 23-B.

A. These are the -- this is the attachment I was referring to. That is also part of the application that was filed in support of the renewal of 247 and 248, WDW-247 and 248.

Q. Now, let me note that in your prefiled testimony you have referred to -- starting with 22, Exhibit 22, which is the application for PAA3, this one, you have referred to a number of tabs. And all

of those tabs are in the materials that are in Exhibit No. 22; is that correct?

A. If you'll give me a second, I'll look through it. This appears to have all the tabs that are required for the -- that were part of the production area authorization application.

Q. All right.

MR. HILL: Okay. Your Honor, we will offer the exhibits for admission at the conclusion, if we may, or -- they're identified now. There are other items which he has referred to which are identified in the list of exhibits provided, and we'll get -- get to those as may need be later if there's a need to do so.

With that in order to facilitate the cross-examination, we'll tender the witness for cross-examination. He has -- well, we will offer the -- the prefiled testimony and exhibits at this time.

THE COURT: So when you say you're going to offer the -- the prefiled testimony and the exhibits, you're talking about Exhibit No. 41?

MR. HILL: I'm talking about Exhibit No. 41.

THE COURT: All right. Any objections to the offer of Exhibit 41?

MS. OBERLIN: That's --
THE COURT: That's the direct testimony of Mr. Pelizza.
MR. VALDIVIA: Not on that, your Honor. But I think earlier when we were looking over the -- I forget which exhibit number it was, but it was the PAA3 application, and there was some confusion whether we had identical copies.
I -- just looking over our copy of it, it seems like it's different from the other two, so I'd like to object to that. I don't want to take up time on this, but maybe during a break I could compare what we have. So I'd like for the record to reflect that we do object to the PAA3 application exhibit.
THE COURT: Well, I'll -- I think the only one that's been offered at this point is -- is 41. And so if there's no objection -- are there any other objections to Exhibit No. 41?
MS. OBERLIN: (Moving head side to side)
THE COURT: Exhibit No. 41 is admitted. Now, with respect to the application itself, it sounds as though it's not been offered yet.
MR. HILL: I have not yet offered it.
THE COURT: And so is there any objection to proceeding with this witness's testimony

in the absence of the offer of the application --

MR. VALDIVIA: I'm sorry.

THE COURT: -- at this point? Is there any objection to proceeding with this witness's testimony in the absence of the offer of the application as an exhibit?

MR. VALDIVIA: No, your Honor, not at this time.

THE COURT: Anyone else?

MS. OBERLIN: (Moving head side to side)

THE COURT: Okay.

MR. HILL: When we come back to it, I will point out that the witness's testimony indicates that he wishes to adopt portions of the application identified behind the tabs, but we're holding that in abeyance because of the concern Mr. Valdivia --

THE COURT: And it sounds as though Mr. Valdivia is interested in getting together with you during the break and figuring out what --

MR. HILL: Or he may wish to examine the witness as to the nature of the documents.

THE COURT: And he's certainly welcome to do that. But I encourage counsel to speak during the break to try to figure out what inconsistencies exist between one copy and another. Subject to all of

that, Mr. Pelizza's direct testimony is admitted as Exhibit No. 41. And you may proceed.

MR. HILL: We'll tender the witness for cross-examination. I -- as I understand it, I have no -- I am not here to present his testimony and may not present his -- I am barred from -- I'd be delighted to walk him through it, but I don't understand that to be the procedural agreement.

THE COURT: Right. Okay. So at this point, Mr. Valdivia, would you like to begin your cross-examination?

MR. VALDIVIA: I would, your Honor. I'd just point out that it's a little after noon and this may be a good time to break for lunch. I could proceed with some preliminary background questions, but --

THE COURT: Okay.

MR. VALDIVIA: -- up to you.

THE COURT: Why don't we go off the record for a second.

(Lunch recess from 12:13 p.m. to 1:42 p.m.)

THE COURT: So let us begin.

CROSS-EXAMINATION

BY MR. VALDIVIA:

Q. Good afternoon, Mr. Pelizza.

A. Good afternoon.
Q. Let's start out asking you a couple of questions about your background and your resume, which you provided as Attachment A in your prefile; is that correct?
A. I did.
Q. Did you -- I see here you graduated a bachelor of science in geology from Fort Lewis College. What year did you graduate?
A. 1974.
Q. And a master of science from Colorado School of Mines in geological engineering. What year was that?
A. 1978.
Q. You also state in paragraph 4 you're a licensed professional geoscientist. And when did you get that qualification?
A. I'll give you an about. It was about a year and a half ago. It was as soon as the qualification was allowable for -- the program was brought into existence in the state I was certified. About a year and a half.
Q. 2003?
A. Yes, that sounds reasonable. But I -- it's -- I didn't come prepared to give you that date.

About a year and a half.

Q. And in parentheses there, the -- it says TX geology, and there's a number. Could you explain --

A. Yes.

Q. -- what that is?

A. That's your registration number with the state.

Q. Okay. Is there any significance to that number that you know of?

A. It's like a social security number, only it's a registration with the state. You could go to their database and find my name.

Q. Now, you mentioned that this geoscientist license is a recent development in Texas; is that correct?

A. Yes.

Q. Prior to that was there licensing of geoscientists that you know of in Texas?

A. There -- there may have been certifications available, but the -- the certification under this particular statute, I believe was not.

Q. Okay. And you mentioned a statute. Could -- do you know what the statute's name is?

A. No. It -- it's -- no, I don't.

Q. Okay. Do you have a continuing education

requirement to maintain that license?

A. The -- my understanding is, is that that requirement hasn't been fully developed yet.

Q. So at this time you don't have that requirement to your knowledge?

A. To my knowledge, it's not -- it's not required yet.

Q. Is there -- is there -- are you aware of any code of ethics associated with the license?

A. My understanding is, is that there are a code of ethics associated with the license and in the statute, yes.

Q. Okay. And were you required to study and become familiar with that as a condition of retaining the license?

A. You're required to -- essentially at the time that I achieved my license, it was through experience and qualifications. And -- and there was extensive questionnaire that you're required to provide as part of the application. There was an extensive number of references that were required, sealed professional references.

And my understanding is, is that as part of the approval process, your references are checked, and there's an examination of your criminal record

and -- and, you know, just various -- what -- whatever they do. Probably questions that are better asked to the board than it -- than it is to me in terms of what they did to determine that I was qualified.

Q. Okay.

A. But I was qualified.

Q. So if I understand your answer correctly, you didn't -- you weren't required to take a course or do anything other than fill out an application --

A. That's correct.

Q. Is that correct? If -- if someone had a grievance about your work, is there a process for that provided as a condition of the license?

A. I would suspect, yes.

Q. But you're not aware of any?

A. I'm not aware of any.

Q. Is there a governing board that oversees the issuance of your license?

A. My understanding is there is.

Q. Page 5 of your resume, you mention the Vasquez uranium project.

A. Yes.

Q. And you identify that as an undeveloped ISL project?

A. It may be that when that was filled out, it

was not developed yet. It was a new project that was just developed less than a year ago.

Q. So this information on your resume isn't --

A. The Vasquez project --

Q. -- correct as of today?

A. -- as of last October.

THE COURT: Excuse me. I --

THE WITNESS: Yes.

THE COURT: And I'm going to ask each of you. Our court reporter can take down one person at a time but not both persons at a time. So if you would, try to observe that procedure.

MR. VALDIVIA: Yes, your Honor.

Q. (By Mr. Valdivia) I was just going to ask you, Mr. Pelizza -- you know, I don't want to interrupt you. I'll just ask you to please extend the same courtesy to me and let me finish my question even though the obvious may already -- the -- the answer --

A. I know.

Q. -- may already be obvious. Can we agree to that?

A. (Moving head up and down)

Q. Is that a yes?

A. Oh, yes. I'm sorry. I'm being quiet.

Q. Okay. We were talking about the Vasquez project, and I was asking you that -- apparently, the project is -- is already under operation at this time; is that correct?

A. Yes.

Q. Okay. So -- and how long has it been operating?

A. I believe we commissioned that project in October of '04.

Q. Okay. So can we assume that you haven't updated your resume since that time?

A. If -- if -- yes. That resume was not updated at the time -- you know, that resume does not include the reference to the Vasquez project being commissioned.

Q. Okay. And in Attachment B of your prefile, page 12, paragraph 56, you mention the Vasquez ISL uranium recovery project began operations in 2004. So this overview is more recent than your resume; is that correct? Can we assume that?

A. Which tab was that again? Just -- just --

Q. It's Attachment B, page 12.

A. Yes, that's -- that's current.

Q. Now, that site is now recovering uranium, and that -- the by-products of that process would need to

go into an injection well at some point; is that right?

A. That is correct.

Q. Which well is being used now for the Vasquez project?

A. It's well WDW-185.

Q. And is that the only well that's receiving Vasquez waste?

A. Yes.

Q. Are you aware of any concerns about Vasquez waste being deposited anywhere at any other well?

A. I've heard a -- I think in -- in one of the written presentations that -- that it -- there's been an accusation of Vasquez waste being disposed of at the Kingsville well, but that is an incorrect accusation.

Q. Okay. And by Kingsville well, you're referring to WDW-247?

A. Yes.

Q. That's currently the only well that's accepting waste, correct? Is that right? Is 248 accepting waste as well?

A. 248 -- no. I'm sorry. 248 -- could I back up? 248 is the completed well. 247 has not been drilled yet.

Q. Where is the Vasquez eluent processed?
A. There -- there is no eluent. If -- if we're going to be technical about the issue, there is no eluent produced associated with the Vasquez project.
Q. Is there any processing that occurred on the Vasquez site at all?
A. The only thing that is done at the Vasquez site is uranium is loaded onto ion exchange resin.
Q. Okay. Okay. Does any process of the Vasquez product happen at Kingsville Dome?
A. The ion exchange resin -- the -- the uranium is stripped from the ion exchange resin at Kingsville Dome, and that product is then processed through the various stages that ultimately result in packaging and shipment.
Q. And from Kingsville Dome it's shipped somewhere else; is that correct?
A. The uranium?
Q. Yes.
A. The product? The product is shipped to a conversion facility in southern Illinois.
Q. And the waste from that processing, that ends up at -- in Well 185?
A. No. The waste that is in -- that is put in Well 185 is the waste associated with the mining at

Vasquez. The uranium -- only uranium is loaded on the ion exchange resin. The ion exchange resin is a very selective type of extraction process that loads only uranium.

Uranium is shipped to Kingsville Dome dry. All of the liquids and wastes that are associated with the Kingsville -- with -- with processing the Kingsville Dome -- the Vasquez material are generated at Kingsville Dome.

Q. I'm sorry. I lost track. So no liquid waste arrives at Kingsville Dome. Is that --

A. That is correct.

Q. -- your testimony?

MR. VALDIVIA: Your Honor? Mr. Hill?

MR. HILL: I was -- I caught an overlap, and I was --

THE WITNESS: Sorry.

MR. HILL: I was -- I'd like to request the witness to wait till the question is asked.

A. Sorry. Ask it again.

Q. (By Mr. Valdivia) Thank you. Was it your testimony just now that no liquid waste arrives at Kingsville Dome? Is that correct?

A. There is no liquid waste that is shipped to Kingsville Dome.

Q. Also on your resume you list the Rosita uranium project?

A. Yes.

Q. And that project is in production; is that correct?

A. No, it is not.

Q. It is not. What's -- what is that project about? Could you --

A. The Rosita is an in situ leach uranium project which is at this point undergoing groundwater restoration.

Q. So production is ceased and you're restoring the groundwater?

A. At this point there is no production at the Rosita in situ leach mine, and there has not been since 1999.

Q. When that project was in production prior to 1999, was waste from that project ever injected into the Kingsville dome injection well?

A. The only processing that was done at the Rosita site would have been drying, so there was no liquid waste from Rosita plant injected into the Kingsville dome well.

Q. Are you aware of any rumors to the contrary?

A. No.

Q. On page 4 of your direct testimony, Mr. Pelizza, you state that you personally super- -- performed or supervised performance of almost all the work done in preparing and submitting URI's application and supporting documentation for issuance of production area authorization No. 3 for URI's Kingsville Dome Mine.

I'm going to ask you to explain the phrase personally performed or supervised almost all or all. It seems to me there are some aspects of the application that -- that you did not perform; is that correct?

A. I'm the coordinator for all of the applications that are filed with our company.

MR. VALDIVIA: Excuse me. I'm going to object as nonresponsive.

THE COURT: Well, I'm not sure that he's finished his response but --

MR. VALDIVIA: I thought I asked a yes-or-no question.

THE COURT: Why don't you reask your question.

Q. (By Mr. Valdivia) Are there certain aspects or certain portions of the PAA3 application which you did not personally perform or supervise?

A. There are aspects which I did not personally perform, but I had a supervisory role over those aspects that I didn't perform.

Q. So there is no aspect of the application, PAA3 application, which you did not perform or supervise?

A. There is no aspect that I did not perform or supervise -- supervise in some capacity.

Q. Okay. So let me ask you about your capacity of supervision. Are there some aspects of the application which you did not directly supervise?

A. I -- you'll have to tell me what you mean by directly supervised.

Q. The person performing the -- the activity reported directly to you, the specifics of that activity.

A. The -- the persons that perform that activity for the purpose of that work reported directly to me.

Q. Was any work -- do you consider supervised work to include -- no. Strike that. I need to get back to the geoscientist licensing.

A. Uh-huh.

Q. Is that different somehow from the -- the engineering seal that I see on documents? Is that a separate qualification?

A. I think one requires that you're an engineer, and the other requires that you're a geologist.

Q. You -- Mr. Hill in his opening statement said that you were willing to offer up your seal --

A. Uh-huh.

Q. -- for permits -- the injection well permits. Do you recall? Were you here for that?

A. Yes.

Q. Could you explain what it is that he was referring to?

A. When one is licensed, you're required to -- and -- and given a number, certified, you're required to purchase a seal. And a copy of that seal -- the record of that seal is sent in to the board where it's filed.

And -- and I guess maybe in response to your question, much like a professional engineer, a professional geologist is required, as needed, to certify by seal their signature as a demonstration that they've reviewed the document. It is your seal.

It's essentially a -- a individual stamp that is associated with -- with you. And essentially there are certain regulatory processes that -- that require a seal from a professional geologist or a professional engineer.

In the case of what Mr. Hill was referring to is -- is that I am -- I have my seal in South Texas right now and am willing to seal any documents that is required as part of this process as -- as a certification that -- that I -- you know, above my signature.

Q. Okay. Now, is that seal an engineer seal?

A. No. It's -- it's a seal that is -- show -- it -- it would look like an engineer seal or a notary public seal or such. But it is not -- it does not say a professional engineer. It says a professional geoscientist.

Q. And I -- you earlier made the distinction between the two, so that's the reason for my question. So you do not have -- you cannot place an engineer seal on any document because you don't have one; is that right?

A. I'm not a registered professional engineer. I'm a registered professional geoscientist.

Q. So your answer is no, you cannot place an engineer seal because --

A. That's correct.

Q. -- you do not have one?

A. I am not a registered professional engineer.

Q. Okay. Now, I understand you have a

geoscientist seal and that that's what you're offering to place on certain documents in this case. What is the effect of that seal? What are you certifying?

A. I'm certifying the quality of the information as technically correct as a -- based on my judgment as a professional geoscientist.

Q. And that certification you're allowed to put -- to certify that as to work that you did not personally perform or supervise?

A. If I review the technical content of the work, then I can certify that work, yes.

Q. Even though that was not work that you personally performed or supervised?

A. I don't think that there was anything that I -- that I sealed that -- that I didn't supervise. If I supervised the work and I reviewed -- and I did review thoroughly all of the materials in the application. Well, of course I didn't seal it.

But then I -- I would -- I -- I could seal that information, yes, if I felt that the work was done properly. As a geologist, if I thought it was proper geologic information, I could certify it after my review.

Q. If you thought the information was proper geological information, you could certify it even

though the underlying activity that generated that information was not something you -- you supervised?

A. I would not certify anything unless I was comfortable with the process that was undertaken and had direct knowledge of the work that was done.

Q. So by supervise, then, you mean -- do you mean to say that you would be familiar with the process?

A. Uh-huh.

Q. Is that a yes?

A. Yes. I would be familiar with the process, the procedures that were used, and the individuals who conducted the work.

Q. And is that what you mean by supervised?

A. That's a portion of supervision, yes.

Q. What else am I leaving out?

A. Well, in -- keeping in mind, within our firm we have a number of individuals who work together as a team. We have engineers, we have geologists, and I work with all of them. We have a number of various components that go into an application as this or many of the other tasks that are done in our business lives.

And we -- our company operates under a -- a set of standard procedures. And I know that

these people use these procedures because that is the requirement of the company. I give specific instructions to these people on what they're supposed to do in terms of how wells are supposed to be sampled and -- and what wells.

We have numerous meetings where we discuss our strategies and our approaches to doing our business. Through this procedures and through this -- this communication and working together, we develop a -- a very close understanding of what people are being expect- -- expect from them and what I expect they have done. It's -- it's a team approach that our business operates.

Q. You mentioned the importance of feeling comfortable that -- before you place a seal on a document. You're familiar with the process, the individuals involved, and so forth. Is one of the reasons for that protecting your own license?

A. I think that would be a -- I -- I don't step -- wake up in the morning and -- and -- with the objective to protect my license. I wake up in the morning to see that the job is done right. And in doing so, I don't have to worry about protecting my license.

Q. But that is -- if you certify that a document

is true and correct and you weren't -- didn't perform the work and you didn't supervise it, that would jeopardize your license if someone were to complain about it; isn't that correct?

A. That is correct.

Q. And, in fact, there is, under this new law that licenses geoscientists -- you mentioned you're aware of a code of ethics. The code of ethics could come into play if someone were to certify documents without being -- performing the activity or supervising it; is that right?

A. That's correct.

Q. Mr. Hill in his opening statement made reference to proof of containment. In other words, that -- my understanding, he -- he intends to show that any contaminants as a result of the Kingsville dome mining activities are contained. Do you recall that statement?

A. Yes.

Q. Are you familiar with how URI would prove that it's containing mine by-products?

A. I'm not sure I understand the question.

Q. One of -- one of the things that you -- that is important to show here is that, for example, the lixiviant is not migrating off-site; is that correct?

Would that be a fair statement?

A. I didn't understand the question. My understanding -- when -- when Mr. Hill was talking about containment, I thought he was talking about containment in the context of the disposal well.

Q. Is containment important also in the production area?

A. Hydrodynamic control is important in the production area, which is our -- our means of containment.

Q. How is containment achieved in the production area?

A. The -- and to answer this, I will have to go into a couple of areas to explain our technology in order to get to -- to your answer, which is how is containment controlled in the production area.

Q. Okay. Well, let me see if I can break it down a little bit.

MR. HILL: I believe the witness was about to answer his question and is entitled to answer.

THE WITNESS: I -- I just have to back off and explain a couple of --

THE COURT: You know, here's what my -- my ruling is. Let me ask Mr. Valdivia a question. Is

it your desire to ask some questions about specific areas of the -- the process so he would not need to explain the entire process?

MR. VALDIVIA: Well, I was -- I didn't want to have him give a long rambling answer.

THE COURT: Okay.

MR. VALDIVIA: But perhaps that may be necessary given my question. I was going to try to direct -- he seemed to have a problem understanding my question, and -- and that's why I offered to break -- I'm okay with letting him answer.

THE COURT: Okay. Well, if it's your intention to ask him about the entire process, you certainly have that right. But if you wish to ask him questions about specific elements of the process, you may effectively withdraw that previous question and ask more specific ones.

MR. VALDIVIA: I --

THE COURT: It's certainly your right.

MR. VALDIVIA: I'm interested in containment in the production area.

THE COURT: Okay.

MR. VALDIVIA: So --

THE COURT: Why don't we do this. Why don't you ask your question again and then the witness

can respond.

MR. VALDIVIA: Could you read my question back, please.

(Requested portion was read)

A. Well, to start, the entire regulatory approach and the way the production area is designed is to assure containment. Now, the mine is operated with a -- by -- with what's called a bleed. That's step one.

What a bleed means is that if an operator were -- is -- is circulating fluids -- and we circulate the native groundwater that's in -- in the mine, and that is the leach solution. There is no additional mass brought in to cause overinjection. It's purely a circulation.

Under ideal conditions with a balanced well field, i.e., with injection and extraction balanced and -- and engineered patterns, that would assure that the leach solution is contained to the ore, to the geometry of the ore under ideal situations.

But we all know that there's no such thing as an ideal world. Therefore, what is required is that a production bleed is utilized. What a production bleed means is that more fluid is extracted

than is injected.

And, for example, if a thousand gallons per minute of water was being extracted from a well field -- and I use that just as an even number so we can do the math easily -- then possibly 990 or only 99 percent would be reinjected back into the ground.

By doing that you always cause native groundwater from outside the mine area to flow in toward the mine area, which essentially is your first tier of guarantee to assure containment. It is impossible for water to flow against the gradient that is caused by the operator and the mine area.

The second level of assurance and containment is the monitor well ring itself. The monitor well ring completely encircles the mine area. We measure -- prior -- prior to turning on a production area, the monitor wells are tested.

They are tested for fluid water quality to demonstrate the premining water condition. They are pump tested to assure that the monitor wells function. That information is in this application. During mining we monitor the effectiveness of our bleed through the monitoring process.

We monitor the -- we -- we sample the monitor wells, and we analyze for controlled

parameters to assure that chemically there's no changes. And that is a level of protection in the mining process.

A second area that the monitor wells are useful that we employ is we also monitor water levels in the monitor wells during mining. Now, when one runs a production bleed and extracts more water than they inject, that's going to cause water in the production zone to drop.

I'm down. You're -- you're creating a slight cone of depression in the well field. You can monitor that cone of depression in the individual monitor wells, which we do. And by taking water levels in the monitor wells, we can verify the effectiveness of the bleed.

And by verifying effectiveness of the bleed, you can assure that water is flowing in and not out. If we see an anomaly that indicates that water levels may not be below the premining condition, that gives us a very, very early warning that an adjustment has -- can be made.

We make that -- needs to be made. We make that adjustment and move on. So with those, in my opinion, mine fluids are contained in the mine area as they're supposed to be.

Q. Would you -- is it a fair statement to say, the principal means by which you contain -- you achieve containment in the production area is through the bleed?

A. That's the first tier of means, yes. That -- that and balance. As I said earlier, in an ideal world, a perfectly balanced well field would maintain the fluids in the production area patterns during the mining process. But in addition to that, we operate with a bleed, which assures that if there isn't an ideal world that water is flowing in and not out.

Q. What conditions -- nonideal conditions are you concerned about that you utilize the bleed? Is that -- strike that. Withdraw the question.

You utilize the bleed as a sort of insurance -- is that correct -- to assure there are no excursions?

A. Yeah. The -- the bleed provides an additional level of assurance that there -- to minimize the potential for an excursion.

Q. And you mentioned ideal conditions. To me that suggests there's certain conditions, nonideal conditions that you're concerned about which utilize the bleed to mitigate. Is that a fair statement?

A. Yes.

Q. What conditions would that -- would that refer to?

A. Well, I -- I -- you know, I could speculate -- hypothesize on a number of conditions. But, for example, if a well was not operating to -- a pump, let's say, for example, was not operating to its maximum efficiency and not -- not pumping as much water and there is a period that -- say there -- there was one side of the well field that maybe there was slightly more injection than extraction. Then the bleed would be there to correct, provide a redundancy, if you will, for that situation.

Q. So that situation, slightly more injection than extraction, that's an example of going out of hydrologic balance; is that right?

A. I -- I think, generally speaking, that -- that would be the example. That -- that is what the bleed is designed to compensate for.

Q. Now, you mentioned some other things in your answer. Well, let me back up. Aside from the bleed, do you utilize any other techniques to assure that you aren't having any excursions to -- to assure containment?

A. As I started out and said, that the wells are engineered and they're balanced. That's what

engineers are for. Each well field is laid out well before -- during the design so the proper amount of injection wells and extraction wells are laid out across the well fields, that they're designed to sweep the ore most efficiently.

And they're designed so essentially every drop of fluid that is injected is recovered because it has economic value. So that is the first tier approach. After the design the company conducts operations.

During operations the -- the mining process is very carefully monitored 24/7, 365 days a year. It's -- it's monitored by operators. Every well is metered. The meter readings are taken regularly daily.

Engineers review that information to assure that there is balance. And it's part of operation, and it's looked at very carefully. It's important for environmental considerations. It's important for production considerations.

And above all that, we take a bleed. And above all that, we monitor water levels. And above all that, we monitor water quality.

Q. So you design the production area, the injection and extraction wells, to operate in a way

that maintains a balance, hydrologic balance; is that correct?

A. That is correct.

Q. You utilize the bleed as an assurance or a safety valve in situations when that balance isn't achieved for whatever reason; is that right?

A. That is correct.

Q. And the third area is the monitoring area that you -- you monitor -- your monitoring process is designed to make sure that the design and the bleed are working properly, and in any event you're not getting excursions; is that right?

A. Yes. And -- and two different things that you can look at in the monitor wells. One is water levels and two is chemistry. Water levels are important because the pressure response is instantaneous where any change in chemistry would be much slower. So water levels provide you with an early warning.

Q. You mention the change in chemistry. Could you explain that a little more? Change of the chemistry in the water?

A. Correct.

Q. And that -- how is that -- how do you monitor that?

A. According to our permit, the monitor wells are sampled during operations every two weeks. We conduct analysis for three parameters as required in our permit and our production area authorization: conductivity, chloride, uranium.

Samples are obtained every two weeks. Those parameters are analyzed in our lab, which is important because it's -- it's important to get fast turnaround of results, which an on-site lab assures.

We sample the well through a device that's called either a coil tubing unit or -- or a air lift system, one of the two. The water sample is obtained. It's taken to our lab by URI employees, and it's analyzed for one of those three parameters -- for all three of those parameters.

It's entered into a database, and those numbers are compared with the upper control limits as are specified in our production area authorization to determine if we stay within the bounds of those limits. And that's it.

Q. Okay. You mentioned monitor wells. Are you talking -- there are different classes of monitor wells; is that right?

A. There's -- different monitor wells monitor different zones, if that's what you're asking.

Q. So the answer is yes?
A. Yes. I've never heard it called classes before, but I'll agree with you on that.
Q. Well, I -- categories, if you will. Different categories --
A. They -- they monitor different stratigraphic horizons, yes.
Q. Please. We're falling into our old bad habit of interrupting.
A. Sorry.
Q. Now, you mentioned that you take samples from the wells every two weeks. Is that from every kind of monitoring well you have?
A. Yes.
Q. So it would be every two weeks the wells or the overlying sands are sampled?
A. I'd have to go back. And that would be a case by case, and I'd have to refer to my -- refer to the PAA. I believe that this PAA is structured -- because of the distance, that we're only required to monitor -- have to go back and look on the PAA. I can't recall. I can do that very quickly in this instance.
Q. Would you?
A. Sure.

Q. Do you need the PAA?
A. I need the PAA.
THE COURT: Why don't we go off the record while he finds his documents.
(Off the record)
Q. (By Mr. Valdivia) Mr. Pelizza, while we were off the record, you were -- in response to my question, whether the overlying -- the monitor wells for the overlying sands are tested or -- yes, sampled every two weeks. You reviewed the PAA application to refresh your memory. Have you completed that review?
A. Yes.
Q. Okay. What is your answer?
A. The nonproduction zone wells, which would be the overlying and underlying wells at Kingsville Dome, the requirement in this production area is to sample for water levels quarterly.
Q. Water levels are sampled quarterly?
A. Yes.
Q. But we were talking about chemistry.
A. Uh-huh.
Q. That was my understanding. And water chemistry was tested every two weeks?
A. That -- that -- according to this particular production area authorization, that would be in the

ring of monitor wells.

Q. So -- and by ring of monitor wells, you're talking about those wells that are -- that form -- let me make sure I have the term right, because we want Mr. Hill to -- start talking about a base permit, and I know that that's not right. Production zone? The mine -- the mine area.

A. Correct.

Q. The -- the ring of monitoring wells form the boundary of the mine area; is that correct?

A. That's correct. Yes.

Q. And it's -- by definition you sort of connect the dots. Each monitoring well forms the boundary; is that right?

A. It is a circle around the mine area, yes.

Q. And those are the only wells which you sample for chemistry changes every two weeks? Those are the only wells that you sample every two weeks; is that right?

A. According to this production area, yes.

Q. You say according to this production area. Might you sample them on a different schedule?

A. No. I said according to this production area, that's how -- what you just said is correct; that -- that according to this production area, the

depth -- the monitor well ring is sampled every two weeks. Pressure changes are sampled every quarter in the overlying and underlying zones. And if we see any anomalies in those pressure readings, then we're to take further corrective action.

Q. Okay. Well -- but your answer is -- couched your answer in terms of what the PAA says. Is it your -- are you -- is it your testimony that by your knowledge, either by personally performing or supervising the activities at the Kingsville Dome Mine, that this is what happens, that the monitoring wells are -- the outer ring is tested every two weeks; is that correct?

A. During operations the outer ring is tested every two weeks.

Q. And you know that by virtue of either being involved in that testing or supervising it; is that right?

A. Supervising and auditing.

Q. Could you explain the difference between an audit and supervising?

A. Not only do I have supervisory capacity over certain staff at the site, but on an annual basis I also audit the program in a formal way and -- and assure that -- that the monitoring is done in --

according to our permits and our licenses. I also receive copies of quarterly reports that are sent in to TCEQ, which I review to make sure that they're done correctly.

Q. So as part of your auditing functions, you would make sure all the reports that TCEQ required are submitted -- are completed and submitted in a timely way; is that right?

A. That is correct.

Q. So if any reports or -- or any documentation was incomplete, it would be your responsibility to correct that; is that right?

A. Or -- it would either be my -- yes. It would be my responsibility to correct it, or I'd be accountable if it went through uncorrected.

Q. Let's talk a minute about the monitoring wells and the outer ring. They are -- how is their function different from the overlying and underlying monitoring wells?

A. The outer ring of monitor wells is conducted in the same sand horizon in which the uranium extraction process occurs. The monitor wells in the overlying and underlying zones are just that. They're in different stratigraphic horizons that are generally separated by aquitards where the company has conducted

pump testing to assure that they're isolated.

Q. To assure that what is isolated?

A. The overlying and underlying zones.

Q. And what is -- what is the importance of isolation?

A. The importance -- it's a fundamental issue that you deal with as part of the permitting process, is to assure that the overlying and the underlying sands are isolated from the production zone, because -- or -- or at least that the flow between the sands is retarded enough so that the mining activity in the well field will not impact overlying or underlying zones.

Q. So you're looking for an area that -- where there's not really good -- there's not communication with the production zone; is that right?

A. You're not looking for anything. You -- you take what nature gives you. There are overlying and underlying sands in essentially most cases at in situ leach sites that require protection in the area of the production patterns.

One of the -- the demonstrations that's done early on is -- and -- and is included in the pump test in the -- the PAA package is the pump test information. It's -- it's fundamental in terms of the

science of -- and the regulation of in situ leaching operations, because these overlying and underlying zones are adjacent to the production area of patterns. They overlie it.

So pump tests are conducted. We determine that the areas are isolated. And then after -- during operations water level monitoring here is -- is required as part of the permit to assure that during operations we continue not to have water level responses in the overlying zones.

Q. Okay. You use the term isolated again. What I'm trying to get at is, why is it important that you be monitoring isolated sands?

A. Because the leach solution is required to be contained to the production zone.

Q. Okay. So if you were monitoring a sand that wasn't isolated, you would basically be sampling an area that was -- might be part of the production zone or have some kind of hydraulic communication with the production zone; is that right?

A. If it wasn't isolated, it would have hydraulic communication with the production zone.

Q. So what you're looking for is a layer that does not have good hydraulic communication with the production zone; is that right?

A. I'm sorry. I just don't think I -- I understand what you're -- what you're doing. You're not looking for anything. And maybe we're talking about the same thing, but let me just say it again: What -- what we have is sands in a sequence, in a stratigraphic sequence, that overlie and underlie the production zone.

These sands are separated by siltstones and claystones. And pump tests demonstrate that these siltstones and claystones form what's called an aquitard that retards the flow from one sand to another.

The monitoring is done to demonstrate that these aquitards, for whatever reason, are -- don't allow communication throughout the life of the mine so you don't have leach solution that migrates above or below the mine zone.

Q. So the importance of isolation, as you use the term, is, you want to be sure that you are -- your well -- let's use the overlying sand -- that your well was in the overlying sand that is not getting any kind of -- there isn't liquid seeping in from the production zone; is that correct?

A. Correct.

Q. Your expectation would be, it is isolated

from the production zone. Is that a fair statement?

A. That is correct.

Q. And isn't the purpose of this -- you set this -- designed it this way because what you're trying to detect is a migration from the production zone up to a higher level; is that right?

A. That is correct.

Q. So that's why it's important -- that's why isolation is important; is that correct?

A. That is correct.

Q. So if you place an overlying monitoring well in a zone that is not isolated, you would not get accurate results?

A. What do you mean by you would not get accurate results?

Q. Well, you might have a showing, an indication of an excursion when, in fact, there was none?

A. That doesn't make sense. I'm sorry.

Q. Okay. What would happen if you had your overlying monitoring well in a sand that was not isolated?

A. If you had your overlying monitor well in a sand that was not isolated -- and that's a hypothetical because it would have to presume that it was a nonisolated sand, which I think that the

de facto situation there would be that it would be your production sand.

If the well was not isolated, I would suppose, then, there would be the potential for migration of leach solution into that sand. And the company would have to account for that migration in determining its requirement for reclamation and reclaim that sand when mining was complete. But -- but that's a hypothetical situation, and it doesn't exist in PAA3 at Kingsville.

(Interruption)

MR. HILL: Can we go off the record for natural events here?

THE COURT: Why don't we go off the record for a second.

(Recess from 2:44 p.m. to 2:47 p.m.)

THE COURT: And I'd like to take note of the arrival of counsel after lunch. Ms. Rowland, if you'd like to announce your appearance.

MS. ROWLAND: Yes. Anne Rowland for the Office of Public Interest Counsel.

THE COURT: All right. Thank you.

MS. ROWLAND: Thank you.

THE COURT: Mr. Valdivia.

MR. VALDIVIA: Thank you, your Honor.

Could you read back my last question, please.

(Requested portion was read)

Q. (By Mr. Valdivia) And I believe part of your answer -- part of your answer, basically you would have a well -- monitoring well that was in the production zone. Is that --

A. If it were not isolated -- given the hypothetical, it was not isolated, then it would mean it would have to be a common sand with the production zone.

Q. And similarly, if we're talking about the underlying monitoring well, underlying sand, if it were not isolated, basically you'd have a well monitoring in the production zone?

A. Ditto. It would be the same situation.

Q. Okay. And that would defeat the purpose of the monitoring well, wouldn't it?

A. If there was communication within the sands as I have said, then the -- what that would mean is -- is, it would be the -- a common -- it wouldn't be -- it wouldn't be a separate sand if it was in communication. So then we would have --

MR. VALDIVIA: I'm sorry. Object as nonresponsive.

MR. HILL: Your Honor, my problem is, this is a contrafactual hypothetical. If the king of France and queen of England were compatriots, would they be French or English? I mean, there is no meaningful answer.

THE COURT: All right. And, Mr. Valdivia, I share that concern, so perhaps you can make your example more specific or move on to another question.

Q. (By Mr. Valdivia) Okay. Mr. Pelizza -- is it Mr. or Dr. Pelizza?

A. Mister.

Q. Are you familiar with the underground injection control regulations?

A. Generally, yes.

Q. Okay. Familiar with 30 -- 331.82 construction requirements?

A. Generally, yes. But if -- in terms of specific questions, I'd appreciate specifics.

Q. Okay. Well, I'll represent to you, I have a copy of that reg.

MR. VALDIVIA: May I approach the witness?

THE COURT: Yes.

MR. VALDIVIA: And for reference for

everyone else, it's 331.82 (g), monitoring well location.

THE COURT: Okay.

Q. (By Mr. Valdivia) Could you read -- read this sentence, please, Mr. Pelizza, sub G.

A. Right here?

Q. Yes, sir.

A. These wells shall be located to detect any excursion of injection fluids, production fluids, processed by-products, or formation fluids outside the mine area or zone.

Q. Mr. Pelizza, that was the section of the reg regarding location and construction of monitoring wells. My earlier question was, if you had a monitoring well in the production zone, that would defeat the purpose of the well; is that correct?

MR. HILL: Objection. I don't think that was the question.

MR. VALDIVIA: Okay. I'll withdraw the question.

THE COURT: Well, he's free to ask another question, then. You may -- and so if you have any objection to the question itself, you may interpose that.

Q. Isn't the purpose of the monitoring wells to

detect excursions?

A. Yes.

Q. And so if you've got a monitoring well in the production zone, you wouldn't detect excursion, would you?

A. A monitoring well in the production zone would not be a monitor well. It would be a baseline well.

MR. VALDIVIA: Objection, nonresponsive. I move to strike.

THE COURT: Well, I'm not certain about that, Mr. Valdivia. I -- I think what's happening is, is that you're asking questions about potential problems that might be identified by a well. And the word that you're using for it is a monitor well.

And what I understand from the witness is, is that monitor wells don't pick up those kinds of problems. And so the conflict doesn't seem resolvable. And so, Mr. Valdivia, if I may, let me ask the witness just one question.

What kind of well would pick up an excursion?

THE WITNESS: A monitor well.

THE COURT: All right. So -- so --

THE WITNESS: But if it's in the

production zone, it wouldn't be an excursion because it's permitted.

THE COURT: Okay. All right. So what sort of well would not be in the production zone? It would be a --

THE WITNESS: Monitor well.

THE COURT: -- monitor well. And the kind of well that would be in the production zone would be a --

THE WITNESS: Baseline well.

THE COURT: -- baseline well.

So using that terminology, perhaps you and the witness may be able to communicate more specifically, so if you would continue.

MR. VALDIVIA: Thank you, your Honor. My line of questioning is really just to get to the purpose of the monitoring well. I think he answered the question.

THE COURT: Okay.

MR. VALDIVIA: But, you know, I wanted to make it clear for the record.

Q. (By Mr. Valdivia) Conversely, if you put -- if you put a monitoring well in the production zone, by definition, by your testimony, you don't have a monitoring well anymore; is that right?

A. In the well field patterns, I agree with that, yes.

Q. Now -- and that's because the purpose of the monitoring well is to detect excursions?

A. Yes.

Q. And, in fact, the language of the regulation isn't permissive. It says these wells shall be located to detect any excursion; is that right?

A. Yes.

Q. So it's not a suggestion. It's a requirement of the regulation?

A. Yes.

Q. Getting back to the outer ring monitoring wells, those -- those wells are at -- at what depth are those wells?

A. The outer wells -- ring of monitor wells is at the same depth as the production sands.

Q. So those wells are in the production zone?

A. They're in the mine area outside the production area. And everything I referred to in this previous testimony -- and correct me if I was wrong or you were wrong -- is that I was referring to wells in the production patterns. The monitor well ring surrounds the production well patterns, and that's to demonstrate confinement of leach solution in -- in the

area that's being mined.

Q. So they -- those -- the outer ring -- and I'm just trying to make sure I understand because I know there's some nuances here. The outer ring goes to a depth that would be in the production zone?

A. Correct.

Q. So there are some monitoring wells that do reach into the production zone level, right?

A. The entire monitor well ring is in the production zone --

Q. Okay.

A. -- surround -- you know, at a distance from the mining activity by definition.

Q. So perhaps it wasn't -- you weren't quite precise when we said by definition a monitoring well could never be in the production zone?

A. I was very precise if I my understanding was correct that you were referring to monitor wells in the production area pattern, in the production area versus the mine area.

Q. That's what we were talking about. And those are those wells that we call the overlying and underlying monitoring wells?

A. Yes.

Q. In the case of the outer ring, we're not

talking about wells within or close to the production area -- production zone, rather, but actually the actual border of the production area; is that right?

A. Yes.

Q. And those wells are dug to a depth to reach the production zone?

A. Yes.

Q. Now, those wells -- those monitoring wells in the outer ring should also be constructed to detect excursions; is that right?

A. Correct. Yes.

Q. And if they were not, that would be a violation of the regulation you just read; is that right?

A. Yes.

Q. Now, with the outer ring well -- monitoring wells, are we looking at a different kind of excursion, lateral rather than vertical?

A. Thinking of it in -- in two dimensions, the overlying and underlying -- overlying and underlying wells. In the well field patterns, the production zones would be to monitor for vertical excursions or demonstrate that they don't occur. The monitor well ring would be to monitor for horizontal excursions.

Q. And I used the word lateral, but that's --

A. Horizontal.
Q. -- more or less the same thing?
A. Yes, sir.
Q. Can we agree on that?
A. Yeah.
Q. So if you designed a ring of monitor wells that would never detect a horizontal excursion during the life of the mine, that would violate the regulation; is that right?
A. Yes.
MR. VALDIVIA: May I approach the witness?
THE COURT: Please.
Q. (By Mr. Valdivia) Okay. I'm handing you my copy of your prefiled testimony -- or, rather -- you have a copy of it?
A. I do.
Q. Okay. Tab B, the last page, paragraph 94 --
A. Tab B, I got B-1 through 4.
Q. Oh, I -- okay. Got you. Yes, it's B-1, paragraph 94.
A. B-1 or B prior to 1, B --
MS. MANN: Prior to 1.
A. Prior to 1. Okay.
Q. (By Mr. Valdivia) Yeah, prior to 1. My

apologies. Subparagraph it says the natural gradient for water at Kingsville dome site is 30 feet per year?

A. Yes.

Q. Are you with me? Could you read the last two sentences, please, starting with so if there.

A. So if there is no bleed well field balancing or excursion controls at the PAA3 site, the water would migrate 150 feet over the PAA life. At this distance water would not even reach the monitor well ring before restoration would be complete.

Q. In other words, Mr. Pelizza, the outer ring of those wells would never detect a horizontal excursion during the life of this production area; is that right?

A. If there was an excursion --

MR. VALDIVIA: Objection.

A. Okay. Ask the question again.

MR. VALDIVIA: Could you read it back, please.

(Requested portion was read)

A. No, it's not.

Q. (By Mr. Valdivia) Let's get back to -- we started this conversation when we were talking about containment, and we were talking about monitoring wells as being one means of measuring the containment.

Are you with me?

A. Yeah.

Q. As I recall, you also mentioned pressure testing?

A. Yes.

Q. How does pressure testing --

A. Could I ask you to back --

THE COURT: No.

MR. HILL: Stop.

THE COURT: Please, please, please, Mr. Hill. I mean, this -- this is my function. I don't believe that the attorney had the opportunity to finish asking his question.

THE WITNESS: Sorry.

Q. (By Mr. Valdivia) Mr. Pelizza, I know I talk slowly, but please indulge me. I -- I'm trying to think and ask questions at the same time. How is pump testing proof of containment?

A. Pump testing?

Q. Yes.

A. Pump testing is conducted as part of the demonstration that's required as part of the -- the production area authorization process. Pump tests serve two fundamental roles after the monitor wells have been installed.

The first role is to demonstrate that the ring of monitor wells, the wells that are in the production area sand, are in communication with the production zone. The wells that are pumped are actually production baseline wells. So those are wells that are completed in the ore, if you will.

If -- during the pump test of that ring of monitor wells, water level devices, monitoring devices are placed in the wells. And by pumping the production sand, if we can demonstrate communication with those wells -- which is shown by drawdown of water levels -- it shows that the monitor well ring is in communication with the production sand and is functional. That's purpose number one.

Purpose number two is the overlying and underlying zones in the production area pattern. There we want to see just the opposite demonstration. And what is done there is, similar types of water level recording devices are placed in the overlying and underlying wells, and they are observed during the pump tests to demonstrate a lack of drawdown.

With a lack of drawdown, then that demonstrates that the zone is isolated and that the clays that overlie and underlie the production sand are competent for the purpose of containment during

the mining activity.

Q. So with regard to the outer ring wells, you're saying hydraulic communication -- good hydraulic communication demonstrates that those wells are monitoring horizontal excursions adequately?

A. Yes, sir.

Q. Do you believe that proves -- that's true throughout the production zone?

A. Yes.

Q. So it's your testimony that by the pressure testing, you can establish the adequacy of the outer ring monitors throughout the production zone?

A. Yes.

MR. VALDIVIA: Judge Keeper, I think this might be a good time to take a break and organize.

THE COURT: We will take a short break.

(Recess from 3:06 p.m. to 3:17 p.m.)

Q. (By Mr. Valdivia) Mr. Pelizza, it occurred to me that maybe we are misunderstanding each other through problems of definitions, so I'm going to ask if we can agree on a couple of definitions. And I'm going to take these out of the reg. Okay?

First, we talked some about production areas. Now, that would be an area defined by a line

generally through the outer perimeter of injection recovery wells used for mining. That's in the reg. We're talking about -- can we agree that we're talking about an area on the surface, a ring, or maybe an oval generally around injection wells, extraction wells, area where --

A. Yes.

Q. -- actual production is happening? Is that your understanding of production area?

A. Yes.

Q. We also talked about production zone. And that would actually be underground and at the strata where the actual mining takes place where you're injecting liquid and extracting liquids. Is that --

A. Yes.

Q. -- correct? So the two are different. We're talking about in the production area something on the ground level versus production zone that's belowground. Is that fair?

A. Yes.

Q. Is there anything you think that -- that's inaccurate?

A. The -- the production zone falls within the production area. It's just the production zone is the strata in -- as you said, in which production -- it's

the ore horizon. Production area is the -- would also include the overlying and underlying zones in the area where there will be well field production area. And I think, as you just said, if you'd want to take it all the way up to the surface, you could.

Q. Well, as I read it, we're just talking about the outer perimeter of injection and recovery wells used for mining. That's the area?

A. More or less.

Q. Well, that's what the regulation says. Do you agree?

A. It's the production well field patterns, yes, the production area.

Q. And the production zone is that strata where UR- -- where URI or mining concern is permitted to inject solution and extract; is that right?

A. That's where the mining will occur, yes.

Q. We talked about what I call different classes or categories of wells. And so far we've talked about the outer ring of monitoring wells, overlying monitoring wells, and underlying monitoring wells. Am I leaving anything out? Is there baseline wells?

A. Well, those are the monitoring wells that you just mentioned, yes.

Q. Do you consider a baseline well a monitoring

well?

A. They all provide information. So, you know, what is -- you go to the dictionary and read monitoring. They do monitor for information. They serve a different purpose.

Q. And baseline wells serve a different purpose?

A. Yes.

Q. What is that purpose?

A. To establish baseline.

Q. Okay. And what is baseline?

A. Baseline is -- well, they all -- may all establish -- they -- all of the wells establish baseline as well. Baseline data is obtained from the baseline monitor wells as well as the -- the monitor wells that are used for environmental purposes to demonstrate containment.

Baseline monitor wells -- baseline wells are wells that are completed in production in ore, in the ore zone, in the zone that is going to be mined. They are not used to monitor for any types of excursion during the mining activity.

Q. You referred to environmental wells or wells for environmental purposes. Are you talking about -- by that do you mean the monitoring wells, both the ring and over and underlying wells?

A. Yeah. That -- that probably wasn't -- I would say to assure containment -- to assure containment of leach solution during mining. That would be overlying, underlying the ring of monitor wells.

Q. That's what you were referring to when you used the term environmental?

A. But it's all environmental, so containment is better.

Q. Okay. And you didn't classify baseline wells as environmental. You had -- they have a different purpose?

A. Baseline wells are to determine --

MR. HILL: Objection. There's no question.

THE COURT: Okay. If you'd state your statement in terms of a question.

MR. VALDIVIA: I was trying to get there, your Honor.

THE COURT: Okay. Go ahead.

Q. (By Mr. Valdivia) The purpose of the baseline wells is to determine baseline; is that correct?

A. It's to determine baseline in the -- in the actual mine zone.

Q. And in this production area, isn't it true you have some baseline wells which were production wells previously; is that right?

A. What we have in -- in this unique case, is we have a number of wells that were drilled and sampled prior to any mining activity having taken place. And we used that data and tendered that data, and -- and that was water quality data in the mine zone as it -- as it existed in nature. We tendered that information for this production area to serve as additional baseline data. And I guess that's the answer.

Q. Getting back to the overlying and underlying wells -- well, let's -- withdraw the question. Let's talk about overlying wells. I'm going to use the word categories again. There are two categories. There are two different overlying wells. There's the first overlying sand and second overlying sand that's provided for in the regulations -- that's required by the regulations; is that right?

A. If they exist.

Q. And if they don't exist, you're not required to have -- if there is -- if there is no second overlying sand, you're not required to have a monitor well there. Is that --

A. That's correct.

Q. -- your understanding? And is -- if there were no overlying sand, would you be not required to have monitoring wells?

A. That's correct.

Q. Are you aware of any sites that -- in which there are no overlying sands and no monitoring wells of that category?

A. Yes.

Q. Where would those be?

A. Our Vasquez project has no overlying sand.

Q. Now, the regulations require different -- or provide for different spacing requirements for the wells that go to the first overlying sand as opposed to second overlying sand; is that right?

A. Yes.

Q. And for the first overlying sand, what's the spacing requirement?

A. My understanding is, it's one per four acres unless otherwise authorized by the executive director.

Q. And for the second overlying sand?

A. I believe the answer is the same except it's one per eight acres.

Q. So this permit area is 94 acres; is that correct?

A. That sounds right.

Q. Production area. Excuse me.
A. Production pattern.
Q. I'm sorry?
A. Production area. Is that what you said? Production area. Okay.
Q. And so --
THE COURT: Mr. Valdivia, if you'll hold just one second. May I make a request?
THE WITNESS: Sure.
THE COURT: If you could speak up a little. I'm losing you. The sound of the rain is obscuring your voice.
Q. (By Mr. Valdivia) How many -- in that 94 acres how many overlying sand monitor wells do you have?
A. I dealt with that in my prefile and my rebuttal prefile. I believe that we made a correction. And what -- what we -- we -- in the second overlying, I believe that there were 17.
Q. Okay. Well, my question was how many total, but maybe we can get there.
A. How many total? I can do --
Q. Second overlying you had 17. Do you need a moment to look over your prefile?
A. Well --

THE WITNESS: Jep, can you get me my prefile rebuttal?

MR. VALDIVIA: Do you need to go off the record?

THE COURT: Why don't we go off the record while you look for the document.

(Recess from 3:29 p.m. to 3:37 p.m.)

THE COURT: All right. Pursuant to some off-the-record discussions, it is my understanding that the place where we are now is that Mr. Pelizza is about to refer to some prefiled rebuttal testimony. And the question has come up as to whether or not it is appropriate for him to do so in light of the fact that that rebuttal testimony has not been offered into the record.

And it's my understanding, Mr. Hill, that you would now offer the prefiled rebuttal testimony of Mr. Pelizza in order to address that issue. Am I correct?

MR. HILL: That is correct, your Honor.

THE COURT: Okay.

MR. HILL: And I have identified it as URI Exhibit 44.

THE COURT: Thank you. All right. And so at this point now, Mr. Valdivia, if we may

interrupt your -- your cross-examination of the witness and ask if you have any objection to Exhibit 44.

MR. VALDIVIA: Yes, your Honor, I do. And, actually, I move to strike this exhibit in its entirety, in particular this -- this rebuttal testimony purports to correct deficiencies in the PAA application that we pointed out by Dr. Kier in his prefile.

THE COURT: I see.

MR. VALDIVIA: And the substance of our objection is, this is basically an inappropriate supplementation of the application and should not be admitted because of that.

THE COURT: Okay. All right. I understand. And staff's position on this matter?

MR. REDMOND: We're not objecting to the offering of that exhibit.

THE COURT: Okay. And OPIC's?

MS. MANN: I don't have a copy with me. I looked at it but --

THE COURT: If you could speak up so the court reporter --

MS. MANN: I'm sorry. I don't have a copy with me, and I glanced at it as it was going

around.

MS. ROWLAND: Can we look at --

MS. MANN: Sorry.

MS. ROWLAND: Your Honor, we support the motion to strike. We believe that this -- OPIC, for the record, we believe that it is improper supplementation of their -- their application at this point.

THE COURT: All right. And is the objection of -- there's Mr. Valdivia.

MR. VALDIVIA: Yes.

THE COURT: Is the objection with respect to the entire rebuttal testimony or only with respect to specific parts?

MR. VALDIVIA: Well, if I need to fine-tune it more, I will, your Honor. But the principal objection is to every correction Mr. Pelizza proposes to make to the application, and I submit that that pretty much is the entire rebuttal testimony.

THE COURT: All right. And let me shift the focus back to Mr. Hill and perhaps back to Mr. Pelizza. Do we know at this point whether or not the materials upon which he's about to rely is within the matters that are being objected to specifically?

I mean -- what I'm trying to do is, I'm

trying to move us forward here. That -- that's my goal. And I'm just trying to get this witness's testimony complete, if possible. If it's necessary for me to address these specific objections at this point, I suppose I will. If not, then I'd like to be able to move on.

MR. HILL: Your Honor --

THE COURT: Please.

MR. HILL: -- my turn. First of all, the problem is that if -- since we collapsed it together --

THE COURT: Right.

MR. HILL: -- and I have a witness on prefile -- I didn't get to walk him through --

THE COURT: Sure.

MR. HILL: -- on direct because that's what prefile is about, to stop -- to eliminate one round.

THE COURT: Right.

MR. HILL: However, the prefiled rebuttal should be handled on its own terms. And by its own account, I can -- I can either point out the lines where these matters are addressed -- and they have been addressed in detail more than anyone perhaps wants and -- or I can take the witness on as if this

were voir dire.

But I -- I want to follow the procedure that you want to follow. And the substance of the testimony in the prefile is, number one, many of Dr. Kier's objections were, in fact, matters that he couldn't find and, in fact, are provided.

THE COURT: Okay.

MR. HILL: Other items were illustrations that did not comport with the text but which were not misleading and did not prevent an accurate analysis of the proposed production area authorization request.

Others pointed up additional data or errors which were made in labeling one thing or another, in fact, a couple of wells which, in fact, monitored one zone and were labeled as if another, and so they were collected with the wrong bunches.

Anyway, all of this has been addressed in detail in the prefile, and it has -- this witness and another have concluded after extensive review that there is no material change. There's no change in the -- in the geology. There's no change in any of the representations.

There are, however, simplifications and clarifications that may be appropriate. Part of this

is owing to the fact that this matter has been hanging prior for seven years. And since the last update of the application, it's been three years something.

So I think what -- the applicant's position is, there is nothing in the prefile rebuttal testimony or its exhibits which, if you will, makes any material difference in the application. The application by its own terms was reviewable and was entirely correct.

And it is now -- with the passage of time, there is more information, and there are more clerical errors that have been cleared up. And that's what this is about.

THE COURT: Okay. And let me say to counsel, I apologize. I had thought that what I was doing was providing a method by which we could move things along. And, apparently, I opened up an area about which I wasn't aware that -- that was -- matter of controversy.

So I -- I concur with Mr. Hill on the appropriateness of dealing with the rebuttal testimony on its own terms, particularly now since I see that there is some conflict over its admissibility.

So -- so why don't we take that -- that procedural line off the table, and we will deal with

it in its own time, which, I think, then would get us back to the question of whether or not Mr. Pelizza may refer back to these prefiled documents for the purpose of refreshing his recollection and responding to your question.

So if there's no objection to his doing that, then -- then you are free to continue your cross-examination. If your objection, however, is to the accuracy or truthfulness or reliability of the information upon which he is relying when he responds to your question, then you may interpose an objection about whatever that might be. Do you understand?

MR. VALDIVIA: I think so, your Honor --

THE COURT: Okay.

MR. VALDIVIA: -- but if I could respond --

THE COURT: Yes.

MR. VALDIVIA: -- briefly.

THE COURT: Yes.

MR. VALDIVIA: First of all, Mr. Hill has characterized these connections as immaterial and not making any difference. I'd submit that if they truly are that way, he doesn't even need to introduce them. We should be able to proceed without them.

Secondly, I am concerned about

proceeding with refreshing this witness's recollection using material that -- that -- you know, I'm concerned about opening the door to admitting all this even though it's not appropriate.

THE COURT: Okay. And I'll -- I'll give you a standing objection with respect to the rebuttal testimony, and I will tell you that you are not opening any door at all.

MR. VALDIVIA: I appreciate that. All right.

THE COURT: Okay. And that would, hopefully, get us down the road toward an answer to whatever question it was that you asked Mr. Pelizza that prompted this procedural morass. So with that, why don't you -- does Mr. Pelizza have a copy of the -- the document?

MR. HILL: Your Honor, he does.

THE COURT: He does. Okay. Fine. So without its being offered into evidence and without dealing with its admissibility or the problems that underlie it, then, Mr. Valdivia, it's -- the focus is now on you.

MR. VALDIVIA: Okay. Just one other --

THE COURT: Yes.

MR. VALDIVIA: -- housekeeping -- I

thought it had been offered. Are we not -- is that --

THE COURT: I think it's been withdrawn.

MR. HILL: I made the offer. It's there. Since this is the time to present it, it's there and it's on the table for examination.

THE COURT: Okay.

MR. HILL: If there's an objection and, you know, if any lawyer wants to challenge any aspect of it, this is the -- now the time to do it to my understanding.

THE COURT: My concern is, is that -- is trying to keep things as clean as we possibly can. And my concern is, is that dealing with the objections to an entire corpus of testimony at this point will unnecessarily confuse the cross-examination of the direct testimony on the specific points that he's dealing with, so --

MR. HILL: May I suggest a solution?

THE COURT: Certainly.

MR. HILL: After direct testimony of the witnesses is over, the witnesses who have rebuttal can present their rebuttal and -- in the same fashion we did here, identification, adoption and on.

THE COURT: Mr. Valdivia, how does that

strike you?

MR. VALDIVIA: I frankly thought that that was how it was going to proceed. Otherwise, I would have objected sooner. And I was planning along -- all along, but I didn't know when the appropriate time was. And since the rebuttal hadn't been offered until now --

THE COURT: Okay. So once again, I take responsibility for this mess. So -- so although it has been offered, at this point, Mr. Hill, why don't -- why don't we deal with your offer once we've finished with the direct.

MR. HILL: I'm happy to withdraw the offer, if I'm allowed to offer it --

THE COURT: You are.

MR. HILL: -- later, after we've gone through the round of other witnesses and then address it as if it were live presented. And by that I mean -- do not mean that I will engage him on direct testimony on rebuttal but that only I will present him to adopt his prefile.

THE COURT: Fine.

MS. ROWLAND: Your Honor, can we weigh in on this? That seems much more logical because at that point the other witnesses who he's rebutting --

their testimony will be in the record. And this rebuttal will make more sense and will be easier to understand the objections to it, if that makes any difference to the procedure in court here.

THE COURT: So your -- your suggestion is, is that --

MS. ROWLAND: That what Mr. Hill has just offered, to -- to withdraw it at this point and offer it later after the testimony of the other witnesses, makes more sense because then that -- his -- his testimony -- his rebuttal testimony will be actually rebutting something that's in the record.

THE COURT: It sounds as though we have a general concurrence. Mr. Valdivia?

MR. VALDIVIA: I just -- my comment is -- and again, I guess, this does go to my concern. My question was, how many overlying sand monitors we have, you know. And to answer that question, I didn't think he had to go into his rebuttal testimony, but apparently he does. And that's the -- my concern.

MR. HILL: If I may suggest -- I may be with Mr. Valdivia on this one. I don't think the witness needs to raise the testimony. I think the witness only realized he had done this -- he had come up with this answer before, and he wanted to make sure

he got the same answer live as he did when he was sitting down thinking about it.

So it's not a question of his offering the testimony or relying upon it. He merely refreshed recollection, and I -- so I don't think that we disagree at this point. He looks at it. He's looked at it. He's ready to talk.

THE COURT: Mr. Valdivia?

MR. VALDIVIA: I hope we don't have to change any light bulbs. That may --

THE COURT: I don't think the system would tolerate our billable hours. Okay. So with that, Mr. Valdivia, if you would restate your question.

And then, Mr. Pelizza, you may respond.

MR. VALDIVIA: Could you read -- well, I think I can remember the question.

Q. (By Mr. Valdivia) How -- Mr. Pelizza, how many overlaying sand monitoring wells are there in PAA3?

A. I believe 25.

Q. 25 total?

A. 25 total.

Q. And we talked earlier about the two categories, first overlying sand, second overlying

sand. Do you recall that?

A. Yes.

Q. And the -- one of the distinctions between the two categories is that difference in -- in spacing. The one is -- first overlying sand is one every four acres. Second overlying sand is one every eight acres; is that correct?

A. Yes.

Q. Within the production area, you also have overlying -- and because you have these two different categories, you have two different depths for overlying sand monitoring wells; is that right?

A. Yes.

Q. What are those?

A. I think that we've given them a nominal designation of the 400-foot sand and the 250-foot sand, which is the approximate depth.

Q. Now, would the 400-foot sand be the first overlying sand?

A. Yes.

Q. And so the wells which are in the 400-foot -- the monitoring wells are designated -- 400-foot sand monitoring wells are the wells in the first overlying sand?

A. Yes.

Q. And conversely, the monitoring wells in the 250-foot sand would be those in the second overlying sand?

A. Yes.

Q. And they would be spaced one every eight acres?

A. Approximately, yes.

Q. For the second overlying sand. And for the first overlying sand, one every four acres?

A. Yes.

Q. Okay. So we -- could you tell me, how many monitoring wells do you have in the 400-foot sand?

A. 17.

Q. You have 17 in the 400-foot sand?

A. Yes.

Q. And how many monitoring wells do you have in the 250-foot sand?

A. Eight.

Q. Now, is your testimony that the 400-foot sand is the first overlying sand for the entire production area?

A. No. My testimony is, the 400-foot sand is the first overlying sand. But I will add to that, that it is not contiguous sand over the entire production area.

Q. So in some cases -- and those cases where the 400-foot sand is not contiguous, the 250-foot sand is the first overlying sand?

A. It gets -- it gets difficult to define. It's still the 250-foot sand. It's just that the first overlying sand shales out, turns to shale, is no longer sand.

Q. So it wouldn't be correct to say that where the 400-foot sand shales out that the 250-foot sand is then the first overlying sand?

A. In the area that it would shale out, I -- I -- you could call it the first overlying sand.

Q. Well, isn't that what it is, in fact?

A. For the purposes of monitoring, yes.

Q. And for the purposes of the spacing requirement required by the regulations; isn't that right?

A. The spacing requirement, that is determined by the regulations, you know. This is -- this is not a -- this situation is somewhat irregular, because the sand -- the shallow sand which is the closest to the formation shales out.

As a result, there can't be wells placed in a sand that doesn't exist. We -- because of this unique geological situation, we conferred with staff,

and staff and URI came to terms on what would be a reasonable monitor well spacing. And that is what exists in the production area authorization.

Q. Now, by staff are you referring to agency staff?

A. Yes.

Q. And agency staff authorized you to go with the monitor -- with the spacing that you have now?

A. Yes.

Q. Notwithstanding that testimony, is it your testimony that you have sufficient number of wells in the first overlying sand as required by the regulations?

A. Yes.

Q. As required by regulations, not --

A. Well, I believe the regulations say one per four acres or -- or authorized by commission staff.

Q. And by commissioner staff, you're referring --

A. Sorry.

Q. Do you mean --

A. My fault.

Q. -- the executive director?

A. Yes.

Q. So when you just testified now saying

commissioner's staff --

A. Executive director. I -- I view them -- I view the staff as speaking for the executive director.

Q. And my question was, putting aside the executive director's dispensation, say if that were not the case, do you have -- would you have enough monitoring wells in the first overlying sand?

MR. HILL: Objection as to contrafactual condition -- contrafactual question.

THE COURT: I'll overrule your objection and allow you to ask the question and allow you to answer.

A. Do I believe that there's adequate monitor wells in the overlying sand?

MR. VALDIVIA: Could you read back my question, please.

(Requested portion was read)

A. Yes.

Q. (By Mr. Valdivia) So it wasn't necessary to get the executive director's permission?

A. When we work on geologic situations with staff in laying out a production area, we look at the detailed geology and determine what is -- would provide adequate safety in monitoring that specific situation. We did that.

And I believe that based on the fact that the first overlying sand pinches out here, there's adequate wells in that sand. We have more wells than is normally required in the 250 sand. And I believe that provides adequate monitoring in the 250-foot sand given its tremendous distance from the production zone.

Q. Okay. So if you have eight wells in the 250-foot sand, those wells would have to be in an area of 32 acres; is that correct?

A. More or less, yes.

Q. Is it more, or is it less?

A. Well, I've never -- I have not calculated it.

Q. Well, regulation says one well every four acres, right?

A. And -- and I would expect that that sounds reasonable based on how this PAA is laid out.

Q. And you have eight wells in the sand that requires one well every four acres?

A. That's correct.

Q. Wouldn't the correct mathematical equation be to calculate the acreage for that area to multiply four times eight?

A. If the area was completely overlain by sand, but it is not. That sand disappears. It turns to

clay and it can't be monitored.

Q. We're talking about the 250-foot sand?

A. No.

Q. Is that your testimony?

A. The 250-foot sand, in my view, in my testimony represents the second overlying aquifer. There is no first overlying aquifer where it turns to shale.

Q. Back to my question: Is the area where you have wells in the 250-foot sand 32 acres?

A. I can't give you -- I -- I have not calculated that number.

Q. You cannot calculate that by multiplying four times eight?

A. No, I -- I can't. I have not calculated that number.

Q. Isn't that what the regulation requires, that you space these wells at one every four acres?

A. I just have not calculated that number. I can't give you --

MR. VALDIVIA: Objection, nonresponsive.

THE COURT: Okay. If you'll respond to the question that he's asked, that would --

A. I -- I would estimate that it is about 32 acres.

Q. Now, 94 acres being the entire production area authorization, if we mi- -- or subtract the 32, that means roughly 62 acres or -- withdraw the question. Well, roughly 62 acres are left when you subtract the 32 from the 94; is that correct?

A. Yes.

MR. VALDIVIA: Your Honor, I'm not sure how to do this, but I would like this witness to identify the area where the wells are located. And I'm going to need a moment to refer to the map and see what we're doing. I guess what I'm saying, might be time to go off the record.

THE COURT: All right. Why don't we go off the record.

(Recess from 4:06 p.m. to 4:20 p.m.)

Q. (By Mr. Valdivia) Mr. Pelizza, we -- before we went off the record, we were discussing the distribution of overlaying sand monitor wells. And I guess get back to your hesitancy about the acreage for the 250-foot sand. I calculate that should be roughly 32 acres if you have eight wells.

A. Okay. For the 250 or 400?

MR. HILL: Objection, no question.

Q. I believe I said for the 250. You said you had eight wells?

A. No. I had eight wells for the 400.
Q. And your testimony was --
MR. VALDIVIA: I'm sorry, Jep.
MR. HILL: I'm waiting for questions.
THE COURT: Well, the -- what Mr. Valdivia is doing, my understanding, is reviewing the testimony that had been given and the questions that were asked so he can get to the point where he can ask the question. So my -- my sense of violation of the cross-examination procedure is that we're not -- not there yet, but I'm assuming that Mr. Valdivia will ask a question soon.
MR. VALDIVIA: I'm just trying to summarize so that we can get back on track, your Honor.
THE COURT: Sure.
Q. (By Mr. Valdivia) We were talking about 250-foot sand and being the second overlying sand.
THE COURT: Yes.
Q. And your testimony was that you had eight wells in the 250-foot sand. Do you recall that testimony?
A. If that was my testimony, then I reversed the order. My -- I believe my testimony was, there was 17 wells in the 250-foot sand and eight wells in the

400-foot sand.

Q. Okay.

THE COURT: That's what my notes reflect as well.

Q. (By Mr. Valdivia) Okay. I guess I did have them transposed.

MR. VALDIVIA: Could you read that answer back for me, please.

(Requested portion was read)

THE COURT: That's not what my notes say. And --

MR. HILL: Nor mine.

THE COURT: Okay.

MS. ROWLAND: Your Honor, it is not what our notes say.

THE WITNESS: Well, then I made a mistake.

THE COURT: Okay.

Q. Okay. Well -- okay. I'm going to try -- we're going to go into a little -- we'll come back to this, but get a little bit of history on production area 3. There was an amendment by which the boundaries of this production area were changed; is that correct or -- withdraw the question.

Originally was this area that's now

PAA3, was it more than one production area?
A. This -- this application?
Q. Prior to the amendment was the area that we --
A. No.
Q. -- now call production area 3 contemplated to be more than one production area?
A. Production area 3 -- production area 3 has been production area 3 -- 3 since the application was filed initially in 1997. It has not changed.
Q. Okay. The original area permit showed ten production areas; is that correct?
A. I'd have to refer to that permit, but it sounds reasonable.
Q. And production area 3 was always one of the ten production areas as it's configured on that map?
A. This -- this area was always considered for production, yes.
Q. Were there any areas added to production area 3?
A. No.
Q. Let's talk about the construction of the wells themselves. You read Dr. Kier's prefiled testimony. And in that -- is that right?
A. That I read his testimony?

Q. Yes.
A. Yes.
Q. You're familiar with his testimony?
A. Yes.
Q. Do you recall his testimony regarding completion logs for the wells?
A. Yes.
Q. And in that testimony -- well, withdraw the question. These wells are designed to have a concrete sleeve around them; is that right?
A. Cement sleeve.
Q. Thank you. A cement --
A. Yes.
Q. -- sleeve. What is the purpose of that sleeve?
A. The casing is cemented to fill the annulus between the edge -- the -- the wall of the casing and the borehole.
Q. Now, could you walk me through that process? You -- you bore the hole, and then what happens?
A. In general, wells are drilled with water well type of drilling rigs, rotary type of drilling rigs where the hole is bored to the total depth for whatever the purpose of the well, and the cuttings are returned to the surface with drilling fluids.

Once the well is drilled and the logs are run on the well, the casing is set to the desired depth. The casing is fitted with a -- a wellhead type of device which would enable the casing to hold pressure, and it is pumped with cement under pressure.

There are generally ports at the bottom of the casing, weep holes, or some sort of -- of port where the cement can exit the bottom of the hole. It's -- cement is injected into the casing until -- for a calculated amount, generally until returns are seen on the surface. And then that information is recorded on the well completion report.

Q. Now, how do you know you have enough cement poured into the hole to get a good sealing?

A. It's done mathematically.

Q. Is there any other test that you do?

A. With cement the primary method is calculations, and at times there it flows to the surface. At times it's done mathematically. In other words, if one knows the size of the borehole and one knows the outside diameter of the pipe, one can calculate the areas of both, calculate the area of the annulus and pump cement to fill that volume.

Q. Now, the cement is holding in place a pipe; is that right? There's a pipe --

A. The casing is pipe, yes.
Q. And what's that made of?
A. PVC plastic.
Q. And I believe it was in your prefile that you estimated that the useful life of wells that -- in PAA3 is five years?
A. I'm not sure I said that. If you could point it out to me, it would be helpful.
Q. Would it surprise you or would you disagree with that based on your knowledge of -- your extensive knowledge of the wells that have been drilled in this site?
A. I've never seen a PVC well wear out because of age. They're -- they're essentially inert material. And based on the fact that they're noncorrosive plastic, that they should be functional indefinitely.
Q. Does plastic get brittle with age?
A. Not in the subsurface, no.
Q. So it's your testimony that the PVC plastic won't get brittle over time?
A. That is correct.
Q. Does the PVC adhere well to the cement?
A. I've never heard a report that it doesn't adhere well. The answer is yes.

Q. So would it surprise you if there were any studies or -- concluding contrary to that?

A. Yes.

Q. Do you conduct any tests to test the integrity of the well and -- go ahead.

A. Yes.

Q. What are those tests?

A. We are required to perform mechanical integrity tests on every well that we complete.

Q. And your -- could you describe what that test entails?

A. The mechanical integrity test is a test where each test is -- well is pressure tested after its completion. We pressure -- we -- it's fitted with a pressure head as I had mentioned a bit ago.

The -- once the well is cemented in place and the cement is allowed to cure, the well is pressured up to a pressure that's determined by our permit, and it's closed, and it's required to maintain that pressure for 24 hours. Those -- those information are then recorded, and the well has determined to have mechanical integrity.

Q. Are there circumstances in which you might test for longer than 24 hours?

A. I would -- I wouldn't preclude any

circumstances that wouldn't go 24 hours, but, you know, generally we -- we pressure test and maintain the pressure as required by our permit.

Q. I don't think that answered my question. Are there circumstances in which you may test --

A. Not that I -- not that I can think of offhand.

Q. Are there circumstances in which you may test for longer than 24 hours?

A. The only circumstance that I can think of where you would need to go more than 24 hours would be if the well didn't pass the test, you had to take corrective action and go back in and test again.

Q. Now, this pressure test involves, as I imagine by the name, increasing the pressure inside the pipe?

A. Yes.

Q. For 24 hours?

A. Or -- or whatever -- it may be less than 24 hours. Whatever our permit requires is what we pressure test. It's much -- much like pressuring the plumbing underneath the foundation of your house before you pour your concrete slab. It's a matter of -- of sealing the pipe, putting on a gauge, checking to make sure the plumbing holds pressure.

Q. Do you test -- does this test -- does this test reveal any vertical channels that might be in the wellbore in the annulus?

A. This test only determines whether the casing has integrity.

Q. Do you check for vertical channels at all?

A. The cementing records are what are depended upon to assure that the cementing -- the cement has been placed properly.

Q. Okay. And by cementing records, are those the completion logs?

A. The -- the cement findings shown on the completion logs are -- are the cementing records.

Q. Okay. And in some cases, though, the completion logs for these wells have not been completed; isn't that right?

A. Every instance that there may have been data that was inadvertently omitted from the completion logs, we have gone back to our files and -- and retrieved that information and -- and tendered it with our supplemental information.

MR. VALDIVIA: I object. It goes into an area -- I have a standing objection to -- and it's nonresponsive. Move to strike.

THE COURT: All right. I'll grant

your -- well, you want to respond?

MR. HILL: Yes, your Honor. I think he is intentionally walking a thin line at the very edge and then hoping to knock off testimony that -- that deals with the issues squarely and head on. I think in the interest of full disclosure and getting at the truth of the matter, the witness's testimony is necessary to be in the form it's in.

Otherwise, he's pressed to some sort of artificial penetration -- artificial position where he's trying to avoid talking about what the truth of the matter is in order to get at what -- what it seemed to be, you know, and it's too much explanation.

I think the heart of the matter is exactly what he said, and he should be allowed to respond to the question.

MR. VALDIVIA: Your Honor, I believe my question was, were the completion logs completed. And, you know, I think -- for the answer. But I think if he answered the question, it's not -- it's not necessary for him to go into the -- the rebuttal in order to answer that question.

THE COURT: What was your question again?

MR. VALDIVIA: Read back my question.

(Requested portion was read)

THE COURT: So, I mean, it seems to me that the question has to do with whether or not the completion logs have been completed or not sometimes. The -- the follow-up testimony that might come in with respect to the rebuttal testimony is an explanation of what -- what actually happened. But I think that his question is general enough that it can be answered with a yes or a no.

MR. HILL: Your Honor, that's precisely what couldn't be answered because he didn't say. You didn't complete them in the initial application. You didn't -- you know, you didn't fill in the blanks until some other time.

He said have they been completed. The witness faced with that said, well, yes, they have. And then trying to clear the ambiguity, they have, in fact, been completed but --

MR. VALDIVIA: I can put a time frame on the question.

THE COURT: Excellent.

MR. HILL: But he answered the question that was asked, and we're entitled to the answer. Now, if he wants to ask a partial question or something else, that's up to the counsel.

THE COURT: Okay. Why don't you ask another question.

Q. (By Mr. Valdivia) Prior to the granting of a contested case hearing in production area 3 application, were the completion logs completed?

A. There were a few minor omissions on the completion logs prior to being granted a contested case hearing.

Q. So your answer is no, they were not completed; is that right?

A. The completion logs were not completed, but the information was in the file for each individual well.

Q. What is a centralizer?

A. A centralizer is a piece of hardware that's used to keep the well spaced approximately in the center of the hole. It -- it's made out of plastic or steel, and it looks -- trying to put this in lay terms. It almost looks like a leaf spring on the back of a car that is on a circular device that will be placed on the casing to keep it centered in the hole.

Q. And why is the centralizer important?

A. It's -- centralizers are important to keep casing centered approximately in the center of the hole so the cement will flow uniformly adjacent in the

annulus.

Q. And isn't it true that if the -- if the pipe isn't centered properly, it's leaning against the hole, that you don't get a good seal of that; is that right?

A. I -- I would say, you wouldn't get as good a seal if the pipe was leaning against the side of the hole.

Q. That's because you wouldn't be able to get cement up that side; is that right?

A. You know, that's what centralizers and -- that's what centralizers are for.

Q. And you would expect that would be part of the records -- completion records, that the pipe was centered properly?

A. Yes.

Q. Isn't that right? Now, the purpose of these, the integrity standards and completion logs, these all go to making sure that you have a tight seal around the well. Is that a fair statement?

A. That is correct.

Q. And if you fail in this, you create a risk of excursions. Is that a fair statement?

A. For a number of reasons, if you have -- if -- if you create artificial avenues for intraformational

transfer, you create a potential for excursions.

Q. So your answer is yes?

A. Yes. You know, if -- if you had leakage behind the casing, the answer is yes, if.

Q. And in the case of, for example, a monitoring well going into the production zone, if you create a situation where there's leakage, you allow for an -- excursions out in the perimeter; is that true?

A. No. I would say that that is stretching it, because out in the perimeter, if you were to have the potential for an excursion, it would show up as an excursion in the monitor well. You can't have an excursion unless there's leach solution to excur. So that -- I -- I disagree with that.

Q. So for the outer ring wells, are you saying, then, that the integrity requirements are less important?

A. I would say the integrity requirements for monitor wells are less important than the integrity requirements for injection wells in the well field pattern.

Q. You use the word monitoring wells, and my question was about the outer ring. Are you talking --

A. That's what I meant.

Q. -- about all monitoring wells?

A. Well, I think you asked me about the well field ring, and that's what I was referring to.

Q. Well, then, what about the overlying and underlying monitoring wells?

A. I think the integrity requirements are most important where the injection well is in the well field pattern, but we treat them all equally as a matter of procedure in the company. Therefore, the monitor wells and the injection wells get the same integrity testing.

But my professional view, the integrity tests are most important for the injection wells because those are the wells that -- that receive sustained pressure during the mining operation.

Q. Are you familiar with the rule regarding 400-foot spacing of monitoring wells?

A. In the monitor well ring, yes.

Q. And what's your understanding of that requirement?

A. My understanding is, the rule reads that wells will be spaced at a hundred feet apart and 400 feet from the closest injector or extractor well from the production area pattern.

Q. You mentioned in your answer a hundred feet apart. Apart from what?

A. Each other.
Q. And how do you calculate that hundred feet?
A. 400 feet? By measuring 400 feet.
Q. The hundred feet. I'm sorry.
A. Did I say a hundred feet?
Q. That was part of your answer.
A. Then, I --
Q. Maybe I misheard.
A. -- I misspoke. Again, I -- I think what I said was 400 feet apart and 400 feet from the production well pattern. Is that what I said? Well, then, I -- I spoke wrong again, and it was -- I stand corrected. 400 feet apart, 400 feet from the production well pattern is how the monitor well rings are spaced.
Q. Okay. Now, they have to be 400 feet from the production area; is that right?
A. Correct.
Q. And 400 feet from either side of the production area?
A. Is that the same thing? I think it is.
MR. VALDIVIA: Your Honor, I'm going to have -- and I'm not sure if it's -- complies with your protocol, but I'd like to mark that map up there as an exhibit and --

THE COURT: All right. And what exhibit number would you like to give it?

MR. VALDIVIA: I'm sorry?

THE COURT: What exhibit number would you like to give it?

MR. VALDIVIA: Where are we? I guess No. 1.

MS. OBERLIN: Protestant No. 1.

MR. VALDIVIA: Protestant No. 1.

MR. HILL: I believe we already have a long list of exhibit numbers and protestants' names under various names.

MS. OBERLIN: So you would like to continue the number from the January hearing?

MR. HILL: I thought that's what we were doing. But, I mean, otherwise -- I'm just afraid of having one or two -- an exhibit Protestant 1 and an exhibit Saenz 1, an exhibit STOP 1 and then --

MS. OBERLIN: Well --

MR. HILL: -- Protestant --

MS. OBERLIN: -- Jep, at the January 19th hearing, we have them listed by the particular protestant.

MR. HILL: Uh-huh.

MS. OBERLIN: So maybe here we could

just begin at 1, calling them Protestants' 1.

MR. HILL: Yeah, as long as there's anything that's not confusing. I have no particular love for sequential number. I just -- as long as it's not confusing as to whose it is, we don't wind up with two of the same number.

THE COURT: Ms. Oberlin's suggestion seems reasonable.

MS. OBERLIN: Protestant 1.

MR. VALDIVIA: Okay.

MR. REDMOND: Is that an exhibit that we already have?

THE WITNESS: It's in the PAA.

MR. HILL: It's in the application, I believe. But for convenience it may be worthwhile to identify it separately.

Q. (By Mr. Valdivia) Okay. Mr. Pelizza, I had asked you to look at -- could you walk up to what's been marked as Protestants' Exhibit No. 1. And ask you, do you recognize that map?

A. Yes.

Q. Could you tell us briefly -- identify that map.

A. This is a map that shows the general layout of production area 3.

Q. Okay. And is this -- is this map a part of the PAA application?
A. It is.
Q. It was submitted to the agency; is that correct?
A. Yes.
Q. Okay. And it was produced to protestants as part of this contested case hearing?
A. I believe it's part of the application.
Q. Okay. On that map there is an area defined by a blue line and points labeled MW and numbers following that. Do you see that?
A. I see it.
Q. Would you tell us what that is? Is that the monitoring well ring?
A. That's the monitoring well ring.
Q. Okay. I'm going to hand you a pen. Could you just write that in? Put an arrow towards that.
A. What do you want me to write?
Q. How about on the -- to the left side on the center there.
A. Right here?
Q. That -- that's fine.
THE COURT: What is it you want him to write?

MR. VALDIVIA: Excuse me?
THE COURT: What is it that you want him to write?
MR. VALDIVIA: The monitoring well ring or --
A. (Writing)
Q. (By Mr. Valdivia) And above that within that ring, there's an area that's -- has red and blue and, I believe, green lines. Do you see that?
A. Yes.
Q. Could you tell -- identify that area for us, please.
A. Those are the initial well field patterns that were drilled before production was shut down.
Q. Now, is that the area that generally must be within -- the monitor wells must be within 400 feet of?
A. That's a portion of the area.
Q. There are other areas that are in production at -- or had been in production at this -- in PAA3?
A. No. Those are the only portions of the area that were in production, but it's not all of the well field patterns that will be in the production area when it's fully developed.
Q. But at present that is the only area that has

any production wells in it; is that right?

A. Yes. Uh-huh.

Q. Now -- so when referring to production area, this is the only production area in existence at the -- at this time at PAA3; is that right?

A. It's the only area that's been placed into production in PAA3, yes.

Q. And so for purposes of my questioning, this is -- I'm asking, is it -- this is the area we're talking about that would require monitoring wells within 400 feet of them; is that -- is that right?

A. I believe that the production area require 400 feet of monitor wells around production area patterns when that production area is developed.

Q. And so there should be a monitor well within 400 feet of that area that's in -- that presently had been under production?

A. No, I won't agree with that. There should be monitor wells within 400 feet of all the areas that are eventually to be in production. When -- when a production area authorization is complete, we have authorization to produce in more well field pattern than is just shown on this map.

Q. So -- well, I have a ruler over there. Could you -- right in front of the court reporter. And I

think in the lower right-hand side, there's a scale.
A. Uh-huh.
Q. Is roughly what? Two inches equals --
A. Uh-huh.
Q. -- 400 feet?
A. Uh-huh.
Q. Could you put that ruler -- let's see. There's the -- the monitoring well ring on the north side?
A. Uh-huh.
Q. Could you measure that to the production area, south of it?
A. You mean like that?
Q. Yes, sir.
A. Okay.
Q. So that's roughly 2 inches?
A. Yeah, about 400 feet.
Q. And that would be 400 feet?
A. Uh-huh.
Q. Okay. South of that production area --
A. A thousand feet.
Q. Excuse me? About how far would that be?
A. A thousand feet.
Q. And it's your testimony that that's permissible under the regulations?

A. Yes, because there will be additional well field to the south as the production area is developed.

Q. But at this time with only this area in production, you do not have a ring within 400 feet of that production area, do you?

A. It's because only a portion of the production area has been developed.

MR. VALDIVIA: Objection, nonresponsive. Move to strike. I believe he's already testified -- made his point. I'm just -- want an answer on the record.

THE COURT: So what you're looking for is a yes or a no?

MR. VALDIVIA: Yes, sir.

A. No.

Q. (By Mr. Valdivia) Okay. Thank you. You can be seated now. Getting back to the construction of the wells -- and maybe you answered this and I just forgot -- but do you test -- do you do any kind of test to see if there are any vertical channels in the casing?

A. The test that we do to assure that there is no intraformational transfer of fluids, be it fracturing in the overlying clays, be it vertical

leakage along the channels, be it any other exploration hole that may need to be -- have corrective action, is the pump tests. Pump tests were conducted at this production area and included in the application.

Q. And so it's your testimony that that's sufficient, the rules don't require you to do anything else?

A. I didn't say that. I said the pump tests -- you asked me if we do any tests. And I -- what I said is, pump test is the -- the final and the definitive test to assure that there is no intraformational transfer of fluids.

Q. Well, isn't it true if that were the definitive test, then that would be sufficient to comply with the rule?

A. I think what I also said is that what we do is, we maintain cementing records to assure that the cementing was completed. We do mechanical integrity testing to assure that the casing is -- has integrity.

Q. Okay. Well, I was again -- rather than object at this point, I was looking for a yes-or-no answer. Is it your testimony that the pump tests, as you described it, is sufficient to establish compliance with the rules on the mechanical integrity?

A. No.
Q. Yet that's the only kind of testing you do; isn't that right?
A. No.
Q. Okay. What other tests do you perform?
A. For mechanical integrity we conduct pressure testing as I've already described. We have cementing records as I've already described. And we have pump tests as I just described. And with the three of them, they're adequate to demonstrate that the drilling of the wells do not allow for intraformational transfer of fluids.
Q. Maybe I've been confusing the pump test with the pressure test. Could you distinguish them for me?
A. Yes. The pressure test, as I had mentioned earlier, was the test that was done on the casing where after the casing is set and cemented in place, a pressure head is -- is maintained on the casing, and it is pumped with pressure for a period of time that is required in our permit.
Q. 24 hours; is that right?
A. I'd rather go with the period of time that is required in our permit. That way I -- I can be sure what's right. And -- and we have a certain percentage that we're allowed in pressure drop, and that is

recorded. If it does not pass, we need to go back in and find out why, correct the problem, and rerun the test. That is a pressure test.

A pump test -- or possibly I should say a hydrologic test -- is a test that is done on the well field pattern as a whole after all the wells have been completed and developed where we pump wells and we measure responses in wells to assure that there is no intraformational transfer of fluids in the overlying zones.

Q. Now, the pressure test, that's something that you do early on right after you drill the well?

A. That's correct.

Q. Doesn't pressure testing by itself cause stress to the casing?

A. No.

Q. Pressure testing, increasing the pressure wouldn't induce cracking in the case?

A. We never exceed the specifications of the casing or come close in either pressure testing for individual wells or injection pressure during operations.

Q. Isn't it possible, though, that a pressure test could induce cracking?

A. I don't believe it's possible.

Q. Never in any case, impossible?
A. If the pressure test caused cracking, the well would fail the pressure test.
Q. If you were looking for the cracks. Withdraw the comment. Would there be a possibility of cracking from pressure testing that would go undetected?
A. If it -- if the well held pressure, then there was no crack where the pressure could be released. And the well has integrity by -- it's a very simple test. If it holds -- if the balloon holds air, it's not popped.
Q. And the results of this testing is -- are recorded?
A. Yes.
Q. And so for a third party to determine whether the results were -- this well has integrity or not, they would have to go to the records; is that right?
A. Yes.
Q. And so if the records are not complete, there's no way for the third party to know that those wells passed the integrity test; isn't that right?
A. The -- and integrity tests are inspected, and we have to have records that the test was completed, yes.
Q. And if those records are not complete, the

integrity of the well cannot be verified; isn't that right?

A. If the records were not complete, the integrity of the well could not be verified.

Q. Okay. Going to go back to the distribution of overlaying monitoring wells. And I believe there was some confusion -- and you corrected it later -- about how many wells you had in the 250-foot sand. I just want to be clear I got it right. Your testimony now is that you have 17 wells in the 250-foot sand; is that right?

A. That's correct.

Q. Okay. And in the 400-foot sand, you have eight?

A. That is correct.

Q. So -- and if the 400-foot sand is the first overlying sand and you're required to have one every eight acres -- is that right?

A. The first overlying sand, I believe four.

Q. One every four acres. So could you tell me -- if you calculate how -- how much acreage is that, roughly?

A. Well, if we have eight, then that's 32. Direct math.

Q. The 32 acres and the 400-foot sand?

A. Correct.

Q. So for the remaining 250-foot sand, that would -- area -- that distribution would have to cover an area for the remaining 62 acres; is that right?

A. Plus -- plus some.

Q. Okay. I'm going to switch gears on you a little bit here. We've been talking about the PAA. I want to talk some more about -- or ask you some questions about the waste disposal wells. With respect to waste disposal well 248, does URI sample the injection as drip composite or grab method?

THE COURT: Or what?

MR. VALDIVIA: Grab method.

A. Could you help me with that question a little bit? It's sort of like an incomplete question.

Q. (By Mr. Valdivia) It could well be. Does the term grip composite mean anything to you?

A. Not a thing.

Q. Okay. How about grab method?

A. Maybe. I'm not trying to be cagey. I really don't answer -- understand your question.

Q. It's getting late in the day, and that's -- these things happen.

A. Are you asking -- see, I can't ask you, so you're going to have to change the question.

Q. I understand. We're not supposed to have a dialogue. What is your understanding of the grab method as it relates to waste disposal wells?

A. Grab -- grab method is a term that is often given to sampling.

Q. Okay. Well, maybe I can break this down, get more basic here. How does URI sample the injection in waste disposal well 248?

A. We sample the well by taking old water out of the injection stream periodically according to our waste analysis plan.

Q. And does that sampling technique have a name?

A. I suppose -- if -- if you're -- if you're saying is it taken -- a sample over -- a onetime sample over periods of time, I -- grab method would -- would work for me, yes.

Q. Okay. Well, you used the term, and I'm -- can you tell us what that means?

A. What that means is periodically, according to the frequency that we take our sample -- and for different parameters we take samples at different frequency -- there's a port on the injection stream to the disposal well. Then an operator would turn the handle and put a jar under and take a sample and close the handle and take the jar to the lab for analysis.

That's what it means.

Q. And kind of a onetime discrete event; is that right? The grab method, is it something that it -- rather than being done gradually over time?

A. Yes. It's -- it -- and again as I have said, depending on the parameter that's measured, it's done at different frequencies.

Q. Okay. And the grab method, what frequency is that typically?

A. Depends on the parameter that's measured.

Q. Okay. Are there other methods -- does drip -- apparently, drip composite doesn't mean anything to you?

A. (Moving head side to side)

Q. No? Okay. Do you know the capacity of waste disposal well 248 in gallons per minute?

A. Nominal capacity is 200 gallons a minute.

Q. Is there any limit, regulatory limit or legal limit, that you're aware of on the capacity of that well?

A. Yes.

Q. What is it?

A. It -- they're laid out in our permit. There's a instantaneous allowable. There's a average allowable. I think it's -- I think it's an annual

average, but I'd have to refer to the permit. But there's an instantaneous, and then there's an average allowable. Generally the company is conservative, and they'll treat their instantaneous and their averages the same, which is 200 gallons a minute.

Q. Are you aware of any rule or statute or permit provision that prohibits URI from injecting any substance into Class 1 or Class 3 wells within a quarter mile of a groundwater withdrawal well?

A. No.

Q. Are you aware of --

THE COURT: I'm sorry. Did the witness respond?

THE WITNESS: Yes. I said no.

THE COURT: I'm sorry. Go ahead.

Q. (By Mr. Valdivia) With respect to the Kingsville dome project, do you have any such well within a quarter mile of groundwater withdrawal well?

A. With -- a quarter mile to the disposal well? I shouldn't be asking, but I don't understand.

Q. I'm talking about a groundwater -- somebody's well, well water. And the question was, are you aware of any well that is within a quarter mile of one of URI's Class 1 or Class 3 wells?

A. The answer is yes, and I'd have to look at

the map to identify. But yes, there are -- there are wells within a quarter of a mile.

Q. Would you take a moment to look at that map and identify those wells.

THE WITNESS: Jep, we'll have to go off the record.

THE COURT: Let's go off the record briefly.

(Recess from 5:17 p.m. to 5:23 p.m.)

A. I'm looking at a map that shows the water wells in and adjacent to our permit area and our license area that would -- that's in our operations plan.

Q. (By Mr. Valdivia) Okay. And I believe my question -- are you aware of any wells within a quarter mile of URI's Class 1 or Class 3 wells? So your answer is yes?

A. I see two wells that are immediately outside the license area, permit area boundary that would be close to a quarter mile, yes.

Q. Okay. Can you -- for purposes of clarity in the record, could you identify what you're looking at?

A. I'm looking at the location map. This is the same map that was reviewed as part of our area permit that shows the monitor wells in and -- the -- the

water wells in and adjacent to our license area.

Q. Okay.

A. This is -- this is a map in a -- in a book called the Texas Uranium Project Operations Plan. It's essentially our sample location map.

THE COURT: And if I may interrupt at this point, Mr. Valdivia, just for -- again, for purposes of clarification of where you are on the record, is there a Bates stamp number on that page or anything that we can use?

MR. HILL: Your Honor, this is not a record. As I understand it -- I don't understand. This is an exhibit in the case, or this is a map that's drawn from the application for the area permit which was granted in 1989.

THE COURT: I see. I'm sorry. I understood that this piece of paper has come from your application.

THE WITNESS: No.

THE COURT: Not the case. Okay. All right. Mr. Valdivia, please proceed.

Q. (By Mr. Valdivia) Does that map have an identifier of any sort on it?

A. It says monitoring locations.

MR. VALDIVIA: Okay. Mr. Hill, would

you have an objection to having this marked and introduced?

MR. HILL: I don't have any idea at this point what it is or whether it's current or -- or whether it's got other data on it that are irrelevant. I have no idea. It's novel to me.

MR. VALDIVIA: We can deal with that tomorrow. I'll just wrap up my questions.

Q. (By Mr. Valdivia) Could you -- you said you see two wells that are within possibly a quarter mile. Could you identify those for me, please.

A. On this map I see a water well 5 and a water well 8.

Q. And --

A. WDW-5, WDW-8.

Q. Okay. You -- do you know what those numbers signify?

A. Yes. They're water well numbers. They're -- they're wells that we sample as part of our routine monitoring program --

Q. And --

A. -- adjacent water wells.

Q. And do you know who owns those wells?

A. Yes, I do.

Q. Who owns those, please?

A. One is a -- a landowner named Fred Radford, and another is a landowner named Johnny Robinson.

Q. Okay. And who owns which well?

A. WDW-8 is Robinson. WDW-5 is Radford.

MR. VALDIVIA: Enough for today.

THE COURT: Thank you very much. I believe that our agreement is, is that we will reconvene tomorrow morning at nine o'clock in this spot. And we are adjourned for the day. Thank you very much.

(The hearing was adjourned at 5:26 p.m.)

THE STATE OF TEXAS
COUNTY OF NUECES

I, Isabel Connor, Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the above and foregoing contains a true and correct transcription of all portions of evidence and other proceedings requested in writing by counsel for the parties to be included in this volume of the Reporter's Record, in the above-styled and numbered cause, all of which occurred in open court or in chambers and were reported by me.

I further certify that this Reporter's Record of the proceedings truly and correctly reflects the exhibits, if any, admitted by the respective parties.

WITNESS MY OFFICIAL HAND this the 9th day of August 2005.

_____
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